

# Manitoba Medical Review



Official  
Publication  
of the  
**MANITOBA  
MEDICAL  
ASSOCIATION**  
Winnipeg  
Canada

610.5  
M28  
v. 36  
no. 6  
**DOES NOT CIRCULATE**  
**Vol. 36**

**No. 6**

**JUNE - JULY, 1956**

<b>Medicine:</b>	
Some Errors in Medical Technique, F. Gerard Allison .....	359
<b>Ophthalmology:</b>	
Glaucoma, J. E. L. Bender-Samuel .....	362
<b>Surgery:</b>	
Surgical Lesions of the Stomach and Duodenum, James T. Priestley .....	365
<b>Children's Hospital—Ward Rounds:</b>	
A Symposium on Whooping Cough .....	370
<b>Grace Hospital—Clinical Luncheon Report:</b>	
Ectopic Pregnancy—Ovarian, Interstitial and Tubal .....	377
<b>Medical History:</b>	
The Last Days of Ian Maclaren, I. Maclaren Thompson .....	383
<b>Abstracts from the Literature</b> .....	390
<b>Editorial:</b>	
Medical Technique .....	393
<b>Obituary</b> .....	394
<b>Association Page.</b>	
1956 Legislation of Interest to the Medical Profession .....	397
District Society Reports .....	398
<b>Social News</b> .....	401
<b>Winnipeg Medical Society:</b>	
Committee Reports, 1955 - 1956 .....	405
<b>The Medical Library, University of Manitoba</b> ..	414
<b>Department of Health and Public Welfare:</b>	
Communicable Disease Report .....	419
<b>Mortality Statistics</b> .....	419
<b>Detailmen's Directory</b> .....	420

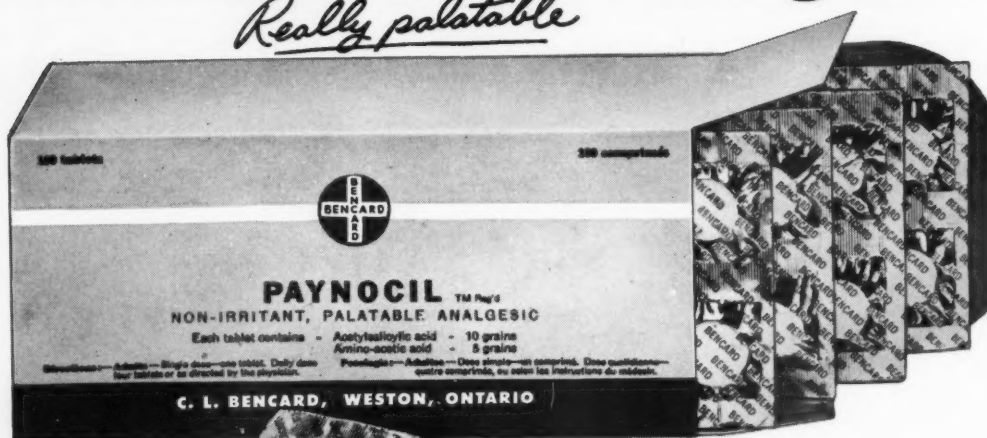
## ANNUAL MEETING

Manitoba Medical Association  
Winnipeg, October 15, 16, 17, 18

UNIVERSITY OF MICHIGAN  
MEDICAL LIBRARY

# **NO Gastric Irritation with this Oral Analgesic**

*Really palatable*



*No water,  
no chewing necessary*

## **PAYNOCIL**

T. M. REG'D.

**Paynocil** represents a considerable advance in new oral analgesics combining Acetylsalicylic Acid and Amino-Acetic Acid.

- Paynocil does not cause gastric irritation.
- Paynocil provides the most palatable and convenient

form of analgesic medication yet developed.

- Paynocil disintegrates pleasantly and rapidly on the tongue. Swallowing with water or chewing are unnecessary.
- Paynocil provides in each tablet an effective dose (10 grains) of Acetylsalicylic Acid.

*Each scored tablet contains: Acetylsalicylic Acid — 10 grains (0.65 gramme), Amino-Acetic Acid — 5 grains (0.32 gramme)*

*(Samples and Professional Literature on Request)*

**C. L. BENCARD, P.O. BOX 99, WESTON, ONTARIO**

# The Manitoba Medical Review

Vol. 36

JUNE-JULY, 1956

No. 6

## Medicine

### Some Errors in Medical Technique

F. Gerard Allison, M.D., M.R.C.P. (Lond.)

The following brief notes on Some Technical Errors in Medicine are presented with the view of alerting the reader to the possibilities of error in investigative procedures. The nature of the subject is such that no conformity or orderly arrangement of material is possible. The topics are, of necessity, isolated and unrelated, except for the common denominator implicit in the title.

#### Lumbar Puncture

The tyro who shoves his needle briskly through the ligamentum flavum, with a sotto voce cry of triumph at having avoided the ubiquitous lamina at last, is apt to get a bloody tap from the anterior spinal veins, a scream from the patient as a nerve of the cauda equina is hit, or even a disc injury. All these may be avoided by shoving the needle 3 mm. at a time, after the ligamentum flavum has been reached, removing the stylet after each thrust.

#### C. S. F. Pressure

The danger of causing pressure on the medulla by an uncontrolled lumbar puncture in a patient with papilloedema is common knowledge, and most physicians are aware that a Queckenstedt test should be limited to patients with suspected spinal cord pressure or lateral sinus thrombosis; but many fail to realize that a basal pressure reading cannot be taken until the patient is relaxed and his neck straightened. The pressure can be raised an average of 50 mm. by flexing the neck, e.g. 132 to 184 mm. For this reason a slightly increased pressure reading cannot be interpreted until the person who did the puncture has been interviewed concerning the position of the patient's head during the puncture. This automatic Queckenstedt effect by flexing the neck must be known to many physicians by personal experience, but I have never seen it in print or heard it mentioned.

#### Venous Pressure

The method of estimating venous pressure elevation by observation of the neck veins in the patient seated upright is subject to an important false positive error in certain individuals in whom the retro-clavicular structures exert pressure on the great veins. Passive elevation and forward pulling of the shoulder will cause the neck vein engorgement to disappear in such persons. The

hepato-jugular reflux, recently studied by Burch<sup>1</sup>, has been used by cardiologists for decades. Manual liver pressure will engorge the neck veins in patients with elevation of venous pressure; thus neck veins become visible in patients with minimal increase in venous pressure. The fallacy here is, that the patient must breathe quietly and not strain, as this will engorge the neck veins in anyone. Burch's theory is that general venous tone is increased in congestive heart failure and constrictive pericarditis. Liver compression in such cases raises venous pressure an average of 92 mm. Normal persons have no rise in venous pressure on liver compression, as low venous tone permits the veins to distend without pressure rise.

#### Blood Sugar Reports

The pedantic accuracy of blood sugars and blood ureas reported to one or two places of decimals has often exasperated me in going through a chart, but I did not realize how dangerous a technical error this can be until the story of an English tragedy was recently related to me. A man in early diabetic coma was given 100 units of Insulin and sent to hospital by his doctor. The resident had the blood sugar taken on the way to the ward. When he received the report slip showing 736 mg.% he ordered another 150 units given intravenously without further examination. Some hours later, after the patient had died, he re-examined the report and saw a small decimal point. The true reading was 73.6 mg. This patient was killed by a decimal. It is obvious that decimal points in blood sugars and ureas have no clinical implication, and serve only to confuse the reader.

#### Electrode Paste Application to Chest Wall

This must be applied gently in acute infarction. A sudden death during slapping paste application in V4 position will always be remembered by the writer. Contrariwise pounding on the chest wall revived a Stokes-Adams patient who had been unconscious and pulseless for about 40 seconds. Electrode paste must not be allowed to spread from one position to another, lest composite complexes be obtained.

#### Serum Amylase

This is subject to an important fallacy if morphine has been given within four hours of a meal while the pancreas is secreting. Gross et al<sup>2</sup> drew attention to this in 1951. Pfeffer et al<sup>3</sup> obtained marked elevation of the serum amylase in 12 normal persons under the above conditions. No

Presented at the Regional Meeting of the American College of Physicians in Saskatoon, Sask., Feb. 1956.

rise was obtained if the morphine was given fast-  
ing. Demerol caused no rise under any conditions,  
presumably, because it caused no Oddi sphincter  
spasm. When amylase studies are desired, Dem-  
erol is the analgesic of choice.

#### Cardboard Sputum Containers

These should be replaced by glass ones with  
external calibration in ounces marked on adhesive,  
for patients with copious sputum. Color, amount,  
consistency, and response to therapy can then be  
observed and charted.

#### Testing Gastric Juice for Free Acid

This should never be done without histamine  
except in asthmatics. A simplified form of the  
test is to collect one specimen only, 30 minutes  
after histamine.

#### Symptomatic Mares' Nests

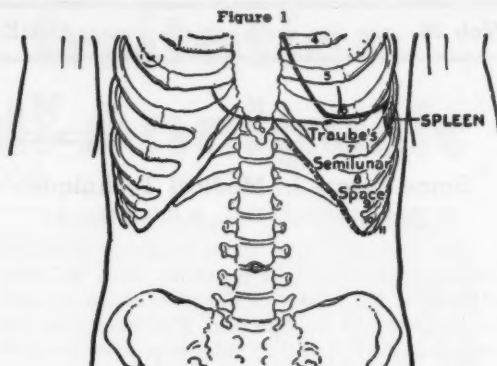
These should be exposed by the first question  
rather than spending time and money on technical  
investigations. For example, the first enquiry  
when the patient complains of haematuria or a  
reddish discoloration in the toilet bowl after a  
bowel movement should be "Have you been eat-  
ing beets or beet soup?" The first question on  
complaint of hemoptysis should be, "Did you have  
a nosebleed?" The first question when shortness  
of breath is the complaint should be "Do you mean  
difficulty getting a satisfactory breath, or do you  
mean panting on exertion?"

#### Traube's Space

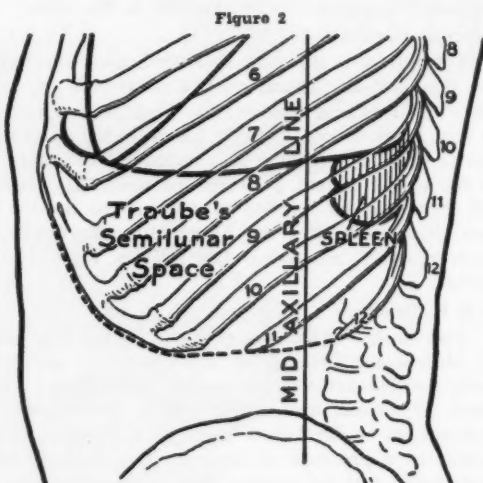
This area of gastric tympany superior to the  
left costal margin is no more than a half-forgotten  
name to most doctors, yet certain physicians of  
experience, like the late A. H. Gordon of Montreal,  
claimed that two seconds of percussion here often  
gave a lead as to enlargement of the left lobe of  
the liver, splenic enlargement or tumors of the  
gastric fundus. Dr. DeWitt Wilcox of London,  
Ontario, facetiously tells his students that he pays  
his office rent by percussing Traube's area. Per-  
haps, it is a financial error rather than a technical  
one to omit this procedure.

It is of value in an abdomen that is too muscu-  
lar, too obese, or too ticklish to examine easily.  
Enlargement of a transversely placed spleen may  
be detected by this method before the tip can be  
felt. The hepatic engorgement of congestive  
heart failure causes only slight encroachment on  
the right border of Traube's area. It is very  
unusual to find a recumbent patient with no  
gastric air bubble. In case of doubt, a carbonated  
drink will soon settle the matter.

It is well to realize that palpation of liver and  
spleen have large margins of error in both direc-  
tions, i.e.: palpable organs may not be enlarged,  
and enlarged organs may be impalpable. The  
low diaphragms of emphysema may depress a  
normal liver until it is palpable. A low-lying

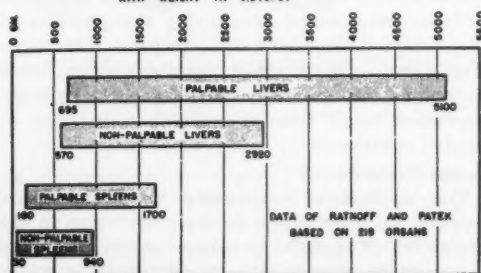


—Traube's semilunar space. Front view.



—Lateral view of chest showing Traube's semilunar space and spleen.

Figure 3  
CORRELATION OF PALPABILITY OF LIVER AND SPLEEN  
WITH WEIGHT AT AUTOPSY



The overlapping of the columns indicates the wide range of organ size in which palpation is unreliable for determination of the presence of enlargement

lateral spleen may also be palpable when of normal size.

The table of Ratnoff and Patek<sup>4</sup> demonstrates the crudity of clinical palpation. If visual



demonstration of liver and spleen is desired, these organs may often be seen in scout films of the abdomen, or incidentally in the course of barium studies.

#### Errors in Radiographic Interpretation

##### (a) Pleural Fluid

A common time-wasting and money-wasting error for internes to make is to order a chest plate to see if pleural fluid is present. Every physician of experience has found fluid by physical signs when radiographs were negative. It is generally agreed that less than 250 cc pleural fluid cannot be detected radiologically. If any doubt exists, aspiration is a much more useful method. It is quick, cheap, harmless, and yields a specimen if positive.

##### (b) Negative Chest Plate

On rare occasions this can be combined with a positive sputum, i.e.: a case with a cavity concealed behind the heart shadow. An additional lateral plate would have revealed the lesion.

##### (c) Post Bulbar Duodenal Ulcer

This was aptly named occult duodenal ulcer by Roscoe Graham<sup>5</sup> in 1938 when he reported seventeen operative cases which had been missed on X-ray. Demirleau in 1939 demonstrated one case radiologically in ten operative cases. Cecil Clark<sup>6</sup> reports re-X-raying 4 cases especially for this diagnosis and finding radiological evidence in two. One case with massive painless melena and negative X-ray was explored twice. On the second operation the ulcer was disclosed only after opening the duodenum. My own interest in this subject was aroused in 1952 when I was asked to see a woman of 52 who had had typical ulcer pain for many years referred to the back. Gall bladder, showing minimal chronic inflammation microscopically had been removed 3 years earlier for alleged colic, probably due to Oddi sphincter spasm from neighboring ulcer. Two barium studies had been negative. Previous psychosomatic treatment had been unavailing. I arranged an exploration for ulcer in the second part of the duodenum and a large one was found on the medial wall of the second part below the ampulla of Vater. Gastrectomy gave immediate relief. Many of the case reports in the literature state that post bulbar ulcers were operated on for massive hemorrhage. It may be that the 10% of haematemesis of unknown cause would be substantially reduced if it became routine for radiologists to search for post bulbar ulcers according to the method described by Ball et al<sup>7</sup>. They advocate placing the patient on the right side with the head of the table lowered, then rotating the patient slightly towards prone or supine position while pressure is used to fill the proximal duodenum. Spasm of the duodenum at the ulcer level produces an eccentric narrowing. Enlarged

Figure 4

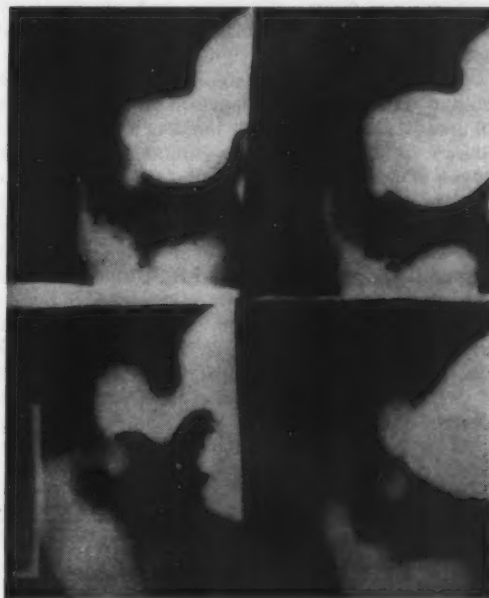
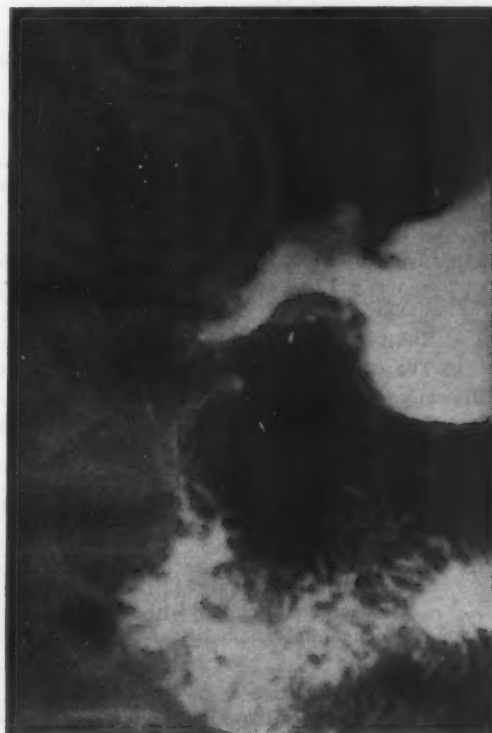


Figure 5



mucosal folds, irritability of the bulb, and hypermotility are noted. Crater is not always seen. Duodenal diverticulum may imitate a crater but does not show the other signs.

One of the most intriguing features of post bulbar ulcer is the comparison of post mortem figures with radiological incidence. Perry and Shaw<sup>8</sup> in 17,652 autopsies found 149 duodenal ulcers of which 12% were in the second portion of the duodenum. Portis and Jaffe<sup>9</sup> in 9,171 autopsies with 158 active duodenal ulcers found that 5% were over 50 mm. from the pyloric ring. In contrast, Kippen at the Winnipeg Clinic, in a new series of 725 radiologically diagnosed duodenal ulcers, as yet unpublished, finds 3 post bulbar ulcers. Possible reasons for the discrepancy between clinical and autopsy figures are as follows:

1. When an ulcer was seen in the bulb no further search was made for an additional ulcer in the

second part. 2. In cases of haematemesis in which conventional radiology and oesophagoscopy were negative the hemorrhage was presumed to be due to an acute erosion. 3. Cases with biliary symptoms were so diagnosed without study of the second part of the duodenum. The technical error of overlooking these ulcers can best be met by routine checking of the second part as described by Ball. Physicians can help by requesting these studies in suspicious cases with negative reports.

#### References

1. Burch: American Heart Journal, 1954. 48: 373.
2. Gross et al.: Proceedings Mayo Clinic, 1951. 26: 5.
3. Pfeffer, Stephenson & Hinton: Gastroenterology, 1953. 23: 482.
4. Ratnoff and Patek: Medicine, 1942. 21: 244.
5. Graham: American Journal Surgery, 1938. 40: 102.
6. Clark: Annals of Surgery, February 1956.
7. Ball, Segal and Golden: American Journal Roentgenology, 1948. 59: 90.
8. Perry and Shaw: Guy's Hospital Reports, 1893. 50: 171.
9. Portis and Jaffe: Journal American Medical Assoc., 1938. 110: 6.

## Ophthalmology

### Glaucoma

J. E. L. Bendor-Samuel, D.O.M.S. (Engl.)

Department of Ophthalmology, Winnipeg Clinic  
Winnipeg, Man.

The term glaucoma is used to indicate a condition in which there is a rise in the intra-ocular pressure. This pressure is determined by:

a) The rigidity of the walls of the globe. This is rarely of importance.

b) The volume of the contents of the eye. The most variable factor here is the aqueous volume, and it is chiefly on this that the intra-ocular pressure depends. Aqueous is formed by the ciliary body, flows from the posterior chamber through the pupil into the anterior chamber and drains back into the venous system at the angle between the iris and the corneo-scleral junction. The volume of aqueous depends upon:

a) The rate of production

b) The facility of drainage

Clinically, therefore, we are concerned with the flow of aqueous and to a lesser extent the rigidity of the corneo-sclera.

#### Classification

Glaucoma may be classified in the following manner:

#### A. Congenital

Congenital glaucoma

Glaucoma associated with other congenital anomalies.

#### B. Acquired

1. Primary — Wide angle  
Narrow angle

#### 2. Secondary — Inflammatory

Post-inflammatory

Traumatic

Lenticular

Vascular

Neoplastic.

#### C. Absolute

#### Investigation

Before continuing with a description of these conditions it may be helpful to consider some of the special investigations that may be carried out when glaucoma is suspected. These will include:

1. Examination of the visual fields. In the wide angle type of glaucoma visual field loss follows a definite pattern, the chief characteristics of which are an arcuate defect beginning at the blind spot and passing above or below but avoiding the fixation area, and a defect in the nasal side with a sharp edge along the horizontal raphe.

2. Measurement of the tension by a tonometer. It must be remembered that the ocular tension rises and falls in a regular diurnal pattern. It rarely exceeds 30 mm. of mercury in a healthy eye. A single low reading does not exclude glaucoma but a single high reading is much more significant.

3. Gonioscopy — By the use of a special lens, the goniolens, the examiner can view directly the angle of the anterior chamber. This will show whether it is wide or narrow and the presence or absence of adhesions.

4. Provocative tests may be carried out in doubtful cases in an attempt to demonstrate the presence of embarrassment of aqueous drainage.

The use of a mydriatic will cause a rise of intra-ocular pressure in narrow angle glaucoma. Wide angle glaucoma may be revealed by the water drinking test, in which the tension is recorded in a fasting patient who then drinks a quart of water. The tension is again recorded at quarter-hour intervals. A rise of more than 6 mm. in half an hour is positive.

5. Tonography may be performed where the apparatus is available. In this test a known weight rests upon the eyeball for a known length of time. Aqueous is thereby forced out of the eye, and the consequent fall of intra-ocular pressure is used to calculate mathematically the facility with which drainage takes place.

#### **Congenital Glaucoma**

Congenital glaucoma results from a failure in development of the angle of the anterior chamber, so that the normal drainage channels are blocked. The obstruction may be partial or complete. The walls of the globe are not rigid as they are in an adult and they yield to the raised pressure, so that the eye expands. It sometimes becomes globular and resembles the eye of an ox, giving rise to the term "Buphthalmos."

At times congenital glaucoma is found in association with other malformations such as aniridia or angioma of the choroid. It is then much less amenable to treatment.

The treatment of congenital glaucoma is usually by goniotomy. In this operation an attempt is made to pass a knife across the anterior chamber and open up the drainage channels by dividing the abnormally persistent tissues. If this fails a filtering operation may be undertaken, i.e. an operation in which an artificial drainage channel is made whereby aqueous can filter through to the intra-ocular tissues. Many of these cases do badly whatever treatment is adopted.

#### **Primary Glaucoma**

Primary glaucoma is a condition of raised intra-ocular pressure, which has not been preceded by known ocular pathology. If in such cases the angle of the anterior chamber is examined, it will soon become apparent that there are two distinct types, those with a narrow angle and those with a wide angle. It is now generally recognized that these two types differ in etiology, clinical course and treatment.

#### **Primary Narrow Angle Glaucoma**

In a subject with an anatomically narrow angle a dilatation of the pupil is liable to obstruct the angle completely, thus raising the pressure. As the aqueous flows from behind forwards, the raised pressure will force the iris still more against the corneo-scleral junction and so a vicious circle is created.

The patient may experience periods of raised pressure in which the cornea becomes oedematous, but in which the tension is insufficient to cause pain. If during this attack he looks at a light such as a car headlight, he will see it surrounded by a halo of coloured rings. Such a complaint should always lead to a full investigation for glaucoma.

A more severe attack leads to the well known condition of acute glaucoma characterised by severe pain often accompanied by vomiting, injection and chemosis, oedema of the cornea and a dilated immobile pupil. In the first instance the iris is merely in apposition with the corneo-scleral junction, but, as a result of the severe reaction, adhesions form between the two tissues. These peripheral synechiae constitute a permanent hindrance to the drainage of aqueous.

The acute attack is treated by the immediate and energetic exhibition of miotics and diamox, and if the pressure does not come down within twelve hours, a broad iridectomy is performed. When medical treatment has reduced the tension, the predisposing factors are still present, and the patient is almost certain to have further attacks. Surgery is therefore indicated.

The decision as to the type of operation may be helped by gonioscopy and tonography. If there are few or no adhesions present in the angle and if the facility of outflow is not reduced, then a small peripheral iridectomy is all that is required. In this case in the event of an obstruction forming, there will be an equalization of the aqueous pressure before and behind the pupil, and the vicious circle referred to above, will not take place. If however, adhesions are present and the facility of outflow is reduced, then some form of filtering operation will be required.

#### **Primary Wide Angle Glaucoma**

The majority of subjects with a raised intra-ocular tension are, however, found to have an anatomically wide angle. These patients have no acute attack, see no haloes and are aware of no loss of vision. The condition is characterized by three physical signs:

- a) Insidious rise of tension
- b) Cupping of the optic disc
- c) Progressive loss of the visual fields.

Central vision is preserved late in the disease and field loss is only too often advanced before the condition is discovered. The cause of this rise of tension is unknown. Some authors consider it to be a progressive vascular sclerosis both of the drainage area from the anterior chamber and of the optic nerve, while others think that the nerve changes are entirely dependent on the raised pressure.

Early diagnosis is of the utmost importance in this condition, and the most important point in

diagnosis is to look for it in all patients over 40. If every routine eye examination in such patients includes tonometry, a proportion of patients are found who though free from all other signs have a raised tension. Provocative tests, of which the water drinking test is the best, and tonography will give further guidance. Of course cases which are first seen at a later stage will show cupping of the disc and loss of the visual fields and the diagnosis will be obvious.

When the diagnosis is established, control of the tension is undertaken by the use of miotics with or without the aid of diamox. If it cannot be controlled thus, operation is indicated. This may be either an attempt to reduce aqueous formation as in cyclodiathermy, or to promote increased drainage by one of the filtering operations. Here again tonography is useful in indicating the degree of control attained by surgical measures.

#### Secondary Glaucoma

In secondary glaucoma the rise in tension follows some pre-existing ocular disease. Of these the following are the commonest causes.

a) Inflammatory. In an acute uveitis of whatever cause there is an outpouring of albuminous constituents of plasma into the aqueous. These protein elements drain with difficulty through channels accustomed only to the passage of aqueous, and outflow is thus embarrassed. It is further embarrassed by the vascular stasis incidental to all inflammation. The aim of treatment is to reduce the inflammation which is responsible for the raised pressure and so mydriatics are given rather than miotics. The simultaneous use of diamox is also helpful.

b) Post-inflammatory. Inflammation of the tissues of the anterior segment of the eye, often leaves behind adhesions, such as anterior synechiae after perforations of the cornea or posterior adhesions after acute iritis, and these may reduce the free flow of aqueous.

c) Traumatic. A contusion of the eye may be followed by an attack of glaucoma, due probably to a derangement of the neurovascular control of aqueous drainage. Perforating wounds of the eye, including operations may be followed by a down growth of epithelium through the wound, which will spread and obstruct the angle.

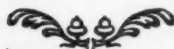
d) Dislocation of the lens, rapid swelling of the lens and exfoliation of the lens capsule, may all cause a mechanical obstruction to the angle.

e) Vascular changes of the choroido-retina. Of these the most frequent is an intractable form of glaucoma which follows on a thrombosis of the central vein of the retina. Enucleation is usually necessary. Glaucoma may also follow other vascular and exudative retinopathies.

f) It should never be forgotten that intra-ocular tumours will cause a rise of tension, and this should always be considered in any acute glaucoma presenting for the first time.

#### Absolute Glaucoma

Any form of glaucoma if unrelieved is liable to progress into a state of absolute glaucoma. This is characterized by uncontrollable tension, severe pain, blindness and degenerative changes in the ocular tissues. No form of treatment is effective. Pain may sometimes be relieved by the retrobulbar injection of 80% alcohol, but in many cases nothing is of avail short of enucleation.





## Surgery

### Surgical Lesions of the Stomach and Duodenum\*

James T. Priestley, M.D.

Section of Surgery  
Mayo Clinic and Mayo Foundation†  
Rochester, Minnesota

Since it is, of course, impossible to discuss all surgical lesions of the stomach and duodenum at this time, these remarks will be limited to a brief consideration of the three commonest lesions of the stomach and duodenum which require attention of the surgeon, namely: duodenal ulcer, gastric ulcer and gastric carcinoma. Comments on these three lesions will not be all inclusive, but will indicate some of the current thinking and certain problems which remain to be solved regarding these lesions.

#### Duodenal Ulcer

The primary objective of treatment for the usual patient who has a duodenal ulcer is to buffer, dilute or reduce his acid gastric secretion to the degree necessary to permit healing of the ulcer and prevent recurrence of peptic ulceration. This is accomplished in the majority of patients by an appropriate medical program designed to buffer and dilute the gastric juice. The remaining patients (perhaps 15 per cent) require some permanent reduction in the amount of gastric secretion in order to obtain lasting relief, and this is accomplished surgically. Indications for surgical treatment of the patient who has duodenal ulcer have not varied greatly during recent years and include: perforation, which may be acute or perhaps subacute; obstruction, which may be sclerotic or largely inflammatory in type; bleeding, which may be acute or have occurred in the past on one or more occasions; failure of adequate response to medical treatment, and lastly any question concerning the benign nature of the lesion which is present. Usually the decision between medical and surgical treatment is not difficult, since the evidence is such that indications for treatment are definite and evident. Borderline situations are encountered, however, which require careful thought and the balancing of various probabilities. It is important that the physician who advises treatment for a patient with a duodenal ulcer should be quite familiar with the results, both good and bad, which may be associated with either medical or surgical treatment, so that the patient will have the benefit of a well-rounded opinion and not one based on bias or incomplete knowledge.

Although one might expect that, after the large experience which has been accumulated in the surgical treatment of duodenal ulcer, few questions would remain and treatment would be quite standardized, actually, of course such is not the case. There is a large variety of surgical procedures which are being performed for duodenal ulcer today, including: gastric resection with removal of a large amount of the stomach, 75 per cent being recommended most often, with either a Billroth I or II type of anastomosis and with or without an associated vagotomy; low gastric resection associated with vagotomy; tubular wedge or sleeve resection of the stomach; gastroenterostomy and vagotomy, or gastroenterostomy alone. In addition to the variations of surgical treatment which are available, the patients present certain variables, which include: age, general health, weight, appetite, activity of the ulcer process, amount of gastric juice secreted in an average period of 24 hours, magnitude of the neurogenic element, site of the ulcer in relationship with other structures such as the common bile duct, amount of inflammatory reaction around the ulcer, and other factors. Because of these numerous variables both in the patient and in the type of surgical treatment which may be employed, it appears advisable to select the operation best suited to the individual patient rather than always to perform the same type of operation. It is true that one may have a standard procedure which he employs for the average patient, but he should not hesitate to alter this choice depending on evaluation of needs for the individual patient.

In choosing the most appropriate operation for a given patient one must first determine the relative importance of various objectives which he wishes to accomplish for that particular patient. Thus, given a patient who is a young man in his twenties, who has a strong family history of duodenal ulcer, who experiences severe and persistent symptoms of duodenal ulcer which are difficult to control, perhaps even when he is in the hospital on medical treatment, who has values for gastric acids which are extremely high, and in whom the neurogenic element is large, one naturally thinks that the most important consideration of surgical treatment is not only cure of the active duodenal ulcer but prevention of recurrence. Under these circumstances one would be inclined to choose an operation which would afford maximal protection against recurrence, namely, high gastric resection and vagotomy. In contrast, if one encounters a thin patient, who has never quite reached a normal weight, who has always had a poor appetite, and whose values for gastric

\*Read at the meeting of the Manitoba Medical Association, Winnipeg, Manitoba, Canada, October 25 to 27, 1955.

†The Mayo Foundation, Rochester, Minnesota, is a part of the Graduate School of the University of Minnesota.

acids are slightly if at all elevated above normal, one thinks not only of the cure of the ulcer and prevention of its recurrence, but also of the importance of the patient's postoperative nutritional status. It is unlikely in a patient of this type that a satisfactory postoperative nutritional status would be obtained if a major portion of the stomach were resected. Under such circumstances, a conservative operation such as gastroenterostomy and vagotomy might well be the procedure of choice. The chances are that such a patient would not require extremely drastic reduction of gastric secretion to effect cure of the peptic ulceration and would be very unhappy if he were to lose weight postoperatively.

There are, of course, many other types of patients encountered between these two extremes. The important considerations in trying to accomplish a good result for the individual patient seem to include: careful analysis and evaluation of the particular problems presented by each patient, decision as to the main objectives of surgical treatment, and selection of the most appropriate surgical procedure for each patient.

The objectives of surgical treatment include: cure of the ulcer and any of its complications which are present, prevention of recurrent ulceration, avoidance of unfavorable postprandial symptoms, and maintenance of a satisfactory nutritional status. These objectives can be accomplished in a large majority of patients with judicious choice of surgical procedure. High gastric resection with complete vagotomy offers the best protection against recurrence, whereas gastro-enterostomy and vagotomy offer the greatest chance for postoperative gain in weight and a satisfactory nutritional status combined with considerable protection against recurrence. In between these two procedures there is low gastric resection with vagotomy, which appears to have many of the advantages and, perhaps, few of the disadvantages of the previously mentioned operations. It is possible that this procedure will be used more widely in the future than in the past. It would seem advisable to permit experience to accumulate in several centers where investigation of tubular, sleeve and wedge resection of the stomach is now being conducted before widespread use of these operations is undertaken. To the present time, and it is quite possible that this may be changed in the future, the routine operation which I employ for duodenal ulcer is resection of approximately 70 to 75 per cent of the stomach with a posterior Hofmeister-Polya type of anastomosis. The length of the proximal loop is only about 2 inches at most, and the distal loop of jejunum is approximated to the greater curvature of the stomach.

One is also influenced in the choice of surgical procedure by the findings at the time of operation.

Thus, if there is a large amount of inflammatory reaction around a deeply placed perforating duodenal ulcer which would render closure of the duodenum more difficult and hazardous than usual, it might be advisable to select some procedure which did not require that the duodenum be severed. With a variety of procedures from which to choose, one must be quite hesitant in selecting an operation which increases the likelihood of postoperative morbidity or mortality even slightly, when some other operation might be selected, which could be performed more safely, with at least, almost as good a prospect for a long-range favorable result.

Postoperative management of the patient who has had an operation for duodenal ulcer also is of importance. It is the hope of the surgeon that the patient who has had an operation for duodenal ulcer may lead a normal life after the surgical treatment. This means not only that the patient must be instructed regarding dietary measures during the early postoperative period, but that he must be observed closely enough and followed long enough to determine that he is taking an adequate caloric intake and that this is accomplished without distress. Difficulties associated with ingestion of food are much easier to correct in the early postoperative period than after they have persisted for some months or perhaps years. In other words, if the patient is "started off right," the chances are that he will continue in a satisfactory manner; and, likewise, if he is not started right, he may have nutritional problems that will be distressing to him in the future.

#### Gastric Ulcer

Gastric ulcer has been the subject of controversy in medical literature for some years. Differences of opinion have been expressed regarding etiology, diagnosis, and methods and results of treatment. Gradually, some clarification of opinion has been reached. For example, it is now generally admitted that, despite the use of all clinical aids, including detailed history, roentgenologic examination of the stomach, gastroscopic examination, evaluation of gastric acids, size and location of the lesion, duration of symptoms, and other factors, there is still at least a 10 per cent error in the differential diagnosis between benign gastric ulcer and actual gastric carcinoma. When this fact is admitted, the seriousness of undertaking medical treatment for presumed gastric ulcer is at once apparent.

Consideration of answers to the following four questions indicates, I believe, the desirability of surgical treatment for the large majority of patients who have gastric ulcer: (1) What is the percentage of error in the differential diagnosis of benign gastric ulcer? (2) What is the percentage of 5-year cures of patients who receive medical treatment for chronic gastric ulcer? (3) What is the

risk of operation for gastric ulcer? (4) What are the results of surgical treatment?

Several studies<sup>1,2</sup> have indicated that the incidence of complete cure for a period of 5 years of the patient who has had a chronic gastric ulcer leaves considerable to be desired and probably ranges only between 20 and 45 per cent. It is true that, because of serious disease elsewhere in the body or other factors, a trial of medical treatment may seem indicated in some patients who have gastric ulcer. If this is undertaken, it is incumbent on the physician to keep the patient under close observation both clinically and roentgenologically in order to make certain not only that the ulcer disappears but also that it does not recur during the next few years. Disappearance of symptoms alone is not an adequate criterion of cure, since many patients who have relatively early cancer of the stomach may be relieved of symptoms for a period of time if medical treatment for ulcer is instituted.

The risk of operation for gastric ulcer today is quite small, not more than 1 or 2 per cent, when performed under favorable circumstances. Obviously, this is much lower than the risk of overlooking an actual malignant lesion, if operation is not performed. The results of surgical treatment of gastric ulcer are, I believe, the most satisfactory of any which are obtained in operation on the stomach. At least 85 per cent of patients are completely and permanently relieved and an appreciable additional percentage are greatly improved. The Billroth I operation is frequently ideally suited for the treatment of gastric ulcer, and, in my experience, is used more often for this condition than any other. It does not appear necessary to remove as much stomach in order to cure the patient who has gastric ulcer as for the patient who has duodenal ulcer. The larger gastric reservoir which remains under these circumstances makes for a more favorable post-operative nutritional status.

#### Gastric Carcinoma

The most important question relative to gastric carcinoma is: How can more patients who have this lesion be cured? Many efforts have been made to increase the curability rate of gastric carcinoma, and some progress has been made. It is important for us not to have a defeatist attitude about gastric carcinoma such as one hears expressed at times, but to remember that some patients with this disease actually are cured. So far as I know, no patient who had gastric carcinoma has ever been cured except by removal of the growth, a fact which makes the problem in its ultimate analysis largely the responsibility of the surgeon, although the role of the general practitioner and of the internist in the early recognition of this disease is one of great importance.

There appear to be five objectives of greatest significance in our efforts to cure more patients who have carcinoma of the stomach, namely: (1) an increase in the incidence of early diagnosis and accurate differential diagnosis, (2) an increase of operability, (3) an increase of resectability, (4) use of the proper surgical procedure in resection of the stomach for cancer, and (5) decrease of operative mortality.

**Increase in the Incidence of Early Diagnosis and Accurate Differential Diagnosis**—There seems little doubt that a small cancer, regardless of its location, permits greater opportunity for cure than a large cancer of the same type in the same location. Obviously, then, an increase in the incidence of early diagnosis of carcinoma of the stomach should increase the ultimate curability rate of this lesion. What factors then are responsible for late diagnosis in cancer of the stomach and how can these be overcome? These factors may be divided into three categories, namely: those which pertain to the lesion, those which concern the patient, and those which are the responsibility of the physician.

Unfortunately, it is true that cancer of the stomach, particularly in certain locations, may progress to considerable size and, possibly, extend to adjacent structures before it produces symptoms which cause the patient to consult his physician. This fact indicates an inherent quality of the growth which as yet has not been overcome.

Much already has been done relative to the "patient factor," and our efforts in this direction should continue. Unfortunately, many patients may neglect early symptoms of cancer of the stomach because they consider these symptoms to be insignificant. Later on, the patient consults the physician, but at this time the growth is found to be in an advanced stage. Efforts should be continued to inform the public at large of the possible serious significance of gastric symptoms which persist for as long as 2 weeks, and under these circumstances consultation with the family physician should be urged. Some patients postpone consulting a physician while a period of self-treatment is tried. Such practice, of course, should be discouraged, since the patient himself is in no position to distinguish between serious and insignificant symptoms, especially within the first few weeks of their onset. Occasionally, social or financial difficulties prevent the patient from consulting a physician, and efforts should be directed at obviating these circumstances.

The "physician's factor" is definitely the responsibility of the medical profession. It means that we must be not only familiar with the early symptoms of cancer of the stomach, but also constantly on the alert for them. Experience indicates that symptoms of early cancer of the stomach fall into three main categories, namely: The so-called



typical history in which the patient has usually been well and healthy until the onset of persistent and progressive symptoms referable to the upper part of the gastrointestinal tract, the ulcer type of history in which symptoms are suggestive of peptic ulcer, and the nondescript type of symptom complex in which general decline, loss of weight, loss of strength, anemia and vague indigestion are the predominant complaints. No patient should be treated for a presumed duodenal ulcer because of symptoms suggesting this lesion until roentgenologic examinations of the stomach and duodenum have been performed. A high index of suspicion is essential for the recognition of early carcinoma of the stomach. It should be realized that approximately 7 per cent of patients with carcinoma of the stomach are 40 years of age or less.

Furthermore, careful differential diagnosis is necessary if early neoplastic lesions of the stomach are to be detected. The important role of the differential diagnosis of gastric ulcer has been discussed. The hazard of malignancy in gastric polyps should be realized, and the polyps should either be removed or kept under close observation for an indefinite period. Exploratory operation should be seriously considered and almost always recommended in any case in which the differential clinical diagnosis between a benign and a malignant lesion of the stomach is uncertain.

**Increase of Operability**—If more patients are to be cured of carcinoma of the stomach, it is apparent that more patients with this lesion must be submitted to operation at a time when there is a reasonable chance that all malignant tissue can be removed. This can be done, if the diagnosis is established early in a higher percentage of cases. The importance of the decision for or against exploratory operation must be fully realized, for, if operation is not performed, there is no known chance of cure at present. Therefore, with few exceptions, a patient should not be denied exploratory operation and with it a chance of cure, except when there is incontrovertible evidence of the inoperability of the lesion. In other words, a surgeon should not be deterred from advising operation because of the advanced age of the patient, emaciation, presence of a palpable mass, anemia or other findings which, although they reflect the probable presence of an extensive lesion, do not definitely indicate inoperability. In general, the surgeon should accept as criteria of inoperability, with the prospect of cure, only such findings as a metastatically involved lymph node above or behind the medial end of the left clavicle—a so-called Virchow's node—an enlarged nodular liver, a metastatic umbilical implant, or metastatic lesions in the pelvis known as a "rectal shelf." There may, of course, be evidence of metastasis elsewhere in the body. If there is any

question about the nature of the distant findings which suggest a metastatic neoplasm, biopsy will settle the issue. At times a palliative operation which may afford considerable relief to the patient may be performed even though the opportunity for cure has been lost.

**Increase of Resectability**—After exploration has been advised and the abdomen opened, the surgeon must decide whether the lesion can be removed. It is difficult to be dogmatic concerning criteria for resectability in the presence of a gastric neoplasm as well as of a neoplasm elsewhere in the body. Any surgeon who operates for carcinoma of the stomach, however, should have not only the technical ability to proceed with satisfactory removal of an extensive lesion, but also the courage to undertake what might appear to be a difficult and perhaps hazardous operation. In general, a carcinoma of the stomach should be removed in all cases in which it seems possible to extirpate not only the lesion but also any and all of its areas of extension. In other cases, removal of the lesion as a palliative procedure may be undertaken, although, of course, this type of operation has no part in increasing curability of carcinoma of the stomach.

Actually, it appears somewhat doubtful to me if curability of carcinoma of the stomach will be greatly increased by the performance of very extensive surgical procedures which are required in the removal of a large, high-grade, gastric growth which has invaded adjacent structures; however, whenever possible, such a lesion should be removed. A recent review<sup>3</sup> indicates that of 50 patients on whom total gastrectomy was performed for extensive carcinoma of the stomach, 18 per cent were alive 5 years later. While this is not a very favorable outlook for the majority of patients in this group, nevertheless, it is quite a satisfactory outlook for those patients who are included in the group of nine who survived for 5 years after operation.

**Use of the Proper Surgical Procedure**—Although currently opinions differ regarding the surgical procedure which should be performed for removal of cancer of the stomach, I believe that the following five criteria embody the essentials of such an operation: (1) "en bloc" removal of the lesion and any local extension; (2) resection of stomach well beyond any microscopic evidence of neoplastic tissue in the gastric wall; (3) complete removal of all regions of lymphatic spread; (4) removal of gastrohepatic and gastrocolic omenta, the greater omentum and usually the spleen, and (5) resection of a portion of the duodenum or esophagus as the case may be if the growth approximates either of these structures.

Some surgeons today recommend total gastrectomy in all cases of gastric carcinoma. Personally, I am not convinced that this is the proper point

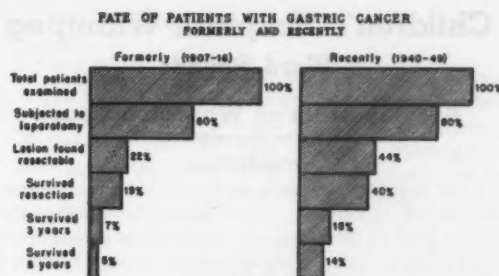


of view. Obviously, gastric carcinoma spreads in many directions in addition to its spread in the gastric wall. Any operation for carcinoma of the stomach which is to survive the test of time must be based on a sound understanding of the pathologic process, which in this instance, as mentioned previously, involves spread in numerous directions beyond the stomach.

**Decrease of Operative Mortality**—As is well known, the operative mortality of partial gastrectomy has been progressively reduced during the last few decades, so that at present a mortality rate of approximately 5 per cent may reasonably be expected. This reduction in mortality has been brought about by a number of factors, including improved preoperative preparation of the patient from the point of view of nutrition, anemia, hydration, electrolytes and vitamins, also from improvements in anesthesia, probably some improvements in surgical technic and better postoperative care. Antibiotics, of course, have played a definite role. Efforts must be continued to decrease the operative mortality further.

**Results of Treatment**—Most reports on the results of surgical treatment of malignant lesions are based on the study of a large group of patients treated consecutively who have been followed for a period of 5, 10 or more years after operation. Although such studies are of interest and contribute significant information, they do not afford an opportunity to determine whether improved results are being obtained in recent years as compared with earlier years. In other words, they do not answer the question: Have all the efforts which have been made to improve results of treatment of a given neoplasm, such as carcinoma of the stomach, resulted in benefits to the patient? A study was completed several years ago<sup>4</sup> which provides an encouraging answer to this question with regard to carcinoma of the stomach.

All patients who were given a diagnosis of cancer of the stomach seen at the Mayo Clinic from 1907 to 1949 inclusive were included in the study. In order to determine whether results obtained in recent years were superior to those of former years, two groups of patients were compared, namely: those seen in the years 1907 through 1916 and those seen from 1940 through 1949. In the comparative study of these two groups of patients, it becomes apparent from the table that improvements in operability, resectability, operative mortality and postoperative survival have occurred. The cumulative effect of the improvements in these separate factors is such that, while of each 100 patients in the earlier group only five were found to be living 5 years later (figure), in contrast, it is estimated that of each 100 patients in the later group, 14 will be living 5 years after operation. Although an increase of only nine survivors out of 100 patients



#### Legend

Improvement of outlook for patients having gastric cancer in the 10 years, 1940 to 1949, as compared with 1907 to 1916. From: Berkson, Joseph, Walters, Waltman, Gray, H. K. and Priestley, J. T.: Mortality and Survival in Cancer of the Stomach: A Statistical Summary of the Experience of the Mayo Clinic. Proc. Staff Meet., Mayo Clin. 27: 137-151 (Apr. 9) 1952.

may not be striking, looked at another way, it represents an improvement of 180 per cent.

If the results are considered in another manner, it was learned that despite an increase in operability rate from 60 to 80 per cent (improvement of 33 per cent), there also has been an increase in the resectability rate of those patients who undergo laparotomy from 37 to 55 per cent. This represents an improvement of 48 per cent. Operative mortality has been reduced from an average of 16 per cent in the earlier group to 8 per cent in the more recent group. Likewise, of the group of patients who underwent gastric resection and did not die during the postoperative period, it is estimated that 35 per cent now live for 5 years as compared with 29 per cent in the earlier group. It is apparent, therefore, that the results of treatment of gastric carcinoma have improved, and, although the advances are not as great as one would like, there is reason for encouragement with the hope that further efforts will result in greater gains in the management of this serious disease.

#### Cancer of the Stomach: Improvement of Outlook\*

Rate	1907-1916	1940-1949	Improvement, per cent†
Operability .....	60	80	33
Resectability .....	37	55	48
Hospital mortality ..	16	8	100
3-Year survival .....	39	43	10
5-Year survival .....	29	35	20

\*From: Berkson, Joseph, Walters, Waltman, Gray, H. K. and Priestley, J. T.: Mortality and Survival in Cancer of the Stomach: A Statistical Summary of the Experience of the Mayo Clinic. Proc. Staff Meet., Mayo Clin. 27: 137-151 (Apr. 9) 1952.

†Based on lower of the two figures.

#### References

- Judd, E. S., Jr., and Priestley, J. T.: Treatment of Gastric Ulcer. Surg., Gynec. and Obst., 77: 21-25 (July) 1943.
- Cain, J. C., Jordan, G. L., Jr., Comfort, M. W. and Gray, H. K.: Medically Treated Small Gastric Ulcer: Five Year Follow-up Study of 414 Patients. J.A.M.A. 150: 781-784 (Oct. 25) 1952.
- ReMine, W. H. and Priestley, J. T.: Late Results After Total Gastrectomy. Surg., Gynec. & Obst. 94: 519-525 (May) 1952.
- Berkson, Joseph, Walters, Waltman, Gray, H. K., and Priestley, J. T.: Mortality and Survival in Cancer of the Stomach: A Statistical Summary of the Experience of the Mayo Clinic. Proc. Staff Meet., Mayo Clin. 27: 137-151 (Apr. 9) 1952.

## Children's Hospital, Winnipeg Ward Rounds

### A Symposium on Whooping Cough

Presented on December 15, 1954

#### Introduction

An apparent increase in the incidence of severe whooping cough in the community during the latter half of 1954 and the death of an infant from this disease, focused the attention of the Children's Hospital staff on this still prevalent malady. A review of whooping cough as seen at Children's Hospital during the year 1954 was presented at a ward round attended by Dr. Roper Cadham of the City Health Department, and Dr. L. S. Lansdown of the Provincial Laboratory, as well as members of the staff of the Children's Hospital.

#### Review of Cases of Whooping Cough Admitted to the Children's Hospital for the Period of 1 Year from January through December 1954

**Dr. Lyle McDonald:** I have reviewed all the cases of pertussis admitted to the Children's Hospital during the above period. A diagnosis of pertussis was acceptable when there was typical paroxysmal cough and a lymphocytosis, or where there was a suspicious cough with lymphocytosis and positive bacteriological finding of hemophilus pertussis on a nasopharyngeal swab.

Total number of cases—17.

**Age Distribution.** Under 1 year, 7 cases (of these 3 were less than 4 months of age). 1 year to 3 years, 10 cases.

**Seasonal Distribution.** All the cases occurred during the latter part of the year July through to December.

**Source of Infection.** A definite contact with pertussis infection was established in 10 cases. In 6 the exposure was known to have occurred within the family and in 4 cases there was known exposure outside of the family.

#### Stage of Disease at the Time of Admission

In catarrhal stage ..... 7 cases  
In spasmodic stage ..... 9 cases  
In convalescence stage ..... 1 case

#### History of Previous Immunization Against Pertussis

Had received pertussis vaccine ..... 1 case  
Had not received pertussis vaccine ..... 6 cases  
Record inadequate or immunization history not known ..... 10 cases

#### Laboratory Findings

Nasopharyngeal culture reported in 9 cases—positive for hemophilus pertussis in 4.

W.B.C.—less than 10,000 ..... 1 case  
10,000 to 20,000 ..... 2 cases  
20,000 to 30,000 ..... 5 cases  
Over 30,000 ..... 9 cases



#### Differential white cell count

Lymphocytes less than 50% .... 1 case  
Lymphocytes 50% to 70% ..... 7 cases  
Lymphocytes over 70% ..... 9 cases

#### Outcome—Complicated Course in 10 cases:

Pneumonia—9 cases

Pertussis encephalopathy—1 case

Deaths—1 case (from pertussis encephalopathy)

An account of the fatal case will now be given.

**Dr. Searle**—This was a 5 month old infant, the youngest of 3 children born of a mother the subject of eczema. The infant's siblings, one an asthmatic and the other with infantile eczema were recovering from whooping cough. She took ill with cough and fever about 3 weeks before admission to Children's Hospital. Her doctor saw her early in her illness and chloromycetin was prescribed with initial improvement, but subsequently deterioration occurred with increasing cough and vomiting and on the day of admission a convulsion. She was admitted to Children's in the care of Dr. J. K. Martin.

On admission she was a pale, sick looking infant with constant rapid twitching mainly of the eyelids, tongue and jaw and intermittent twitching of the limbs. There were lesions of infantile eczema in the dry phase.

The temperature was 104° and there was an audible whoop with paroxysmal coughing.

The anterior fontanelle was under normal tension.

#### Other investigations included:

Hemoglobin ..... 14 grams  
W.B.C. .... 48,000  
N.P. .... 17%  
L. .... 83%

Treatment with intramuscular phenobarbitone supported by oral phenobarbitone was instituted at once. Her condition continued to deteriorate, and she became desperately ill with cyanosed extremities and peripheral circulatory failure. She was prostrate with occasional weak cough and pertussis whoop. Pertussis hyperimmune globulin and hydrocortisone intravenously were given. There was no beneficial effect, and the periods of

apnea became longer requiring resuscitation with oxygen and intubation. Noradrenaline was given intravenously for circulatory failure with no demonstrable effect. On November 29th the child died some 22 hours after admission.

**Dr. Martin:** This child, as you have heard, was seen for fever and cough about 3 weeks prior to admission. She was given chloromycetin for a few days, and this brought the temperature down to normal. The parents did not bother to contact their doctor further until on Sunday morning, the day of admission, the child suddenly began to run a high fever and went into convulsions. The striking thing when she came into the hospital was the severe convulsions. These were controlled only with difficulty. One was afraid to use sedation too liberally because of her apneic spells, but at the same time anxious to control the convulsions since whooping encephalopathy or encephalitis carries a 90% mortality. We did control to some extent her convulsions. Her apneic spells got more and more prolonged and severe, and this is a well recognized cause of death in pertussis.

This child, being only 5 months of age, has not received inoculation against pertussis. This is something that will be discussed later on.

A post mortem examination was carried out by Dr. Jan Hoogstraten.

**Dr. Hoogstraten:** I will give you first a report of the gross pathological findings. They were remarkably minimal. The larynx, trachea and bronchi were about as normal as I have seen. There was no exudate, and there was no hyperaemia of the bronchial mucosa. The only gross pathological feature in the lungs was a minimal degree of atelectasis around the medial and posterior lung borders. We did, however, culture hemophilus pertussis from the bronchi. There were no gross pathological features in the brain, except for a slight prominence of the capillaries in the white matter, and one sees such a change at autopsy in any child who may have had some degree of asphyxia before death. There was, however, one observation on gross examination which suggested that we might yet find microscopic evidence of encephalitis. I refer to many small mucosal ulcerations within the stomach and duodenum. These were multiple and shallow in the stomach about 5 mm. in diameter. In the first part of the duodenum there was an acute ulcer measuring about 1 cm. in diameter with an extremely thin wall. The wall was so soft that it was easily perforated in spite of the fact that this autopsy was performed less than an hour after death. Now, as you may know, we have been finding acute ulceration of the esophagus or the stomach in some children who have died of poliomyelitis, brain tumours and other central nervous system lesions.

The positive histological findings were as follows:

Within the lungs polymorphs were relatively frequent in the bronchial epithelium and walls of the bronchi. The bronchi exhibited a noticeable degree of collapse and had a festooned or corrugated mucosal lining. This resembled the collapsed or contracted bronchi of guinea pigs in anaphylactic shock. There was little or no inflammatory infiltration within the lung parenchyma. There appeared to be small fibrin thrombi within some of the small branches of the pulmonary vessels. There was a microscopic ulceration of the vocal cord containing heavy infiltrate of polymorphs. In the central nervous system sections through the pons, medulla, mid-brain, cerebellum, upper cervical cord, basal nuclei, and cerebral cortex including the hippocampus showed no detectable histological abnormality.

In my experience at this hospital, I have yet to see any specific pathology that I could attribute to pertussis, although it is reported to be one of the greatest killers of young children. I have been unable to find in our autopsy records any note of a fatal case of pertussis. Dr. Chown is also quite definite that he has never before seen a fatal case of pertussis in this hospital come to autopsy. When I discuss the usual pathology therefore, I am not able to report my own experience, but only what is described by others. The pathology reported is minimal in the lungs, consisting of a bronchiolitis with infiltration of polymorphs and sometimes histiocytes in the bronchiolar walls and perhaps minimal infiltration in the interstitial tissues. Fatal cases showing clinical evidence of encephalopathy are reported to show swelling of the cortical cells with rounding and loss of Nissl substance, and one may in some cases find perivenous demyelination within the white matter.

**Dr. Childe:** What about the large peribronchial lymph nodes that used to be spoken about in association with the condition and which were commonly treated by radiation? Are they still being reported?

**Dr. Hoogstraten:** Not that I know of. Of course, any inflammatory change in the lung will give large nodes at the hilum.

**Dr. Medovy:** Do you know Dr. Hoogstraten, if the changes in the brain found in pertussis encephalopathy are similar to those found in children showing encephalopathy after pertussis vaccination?

**Dr. Hoogstraten:** I understand that they are. I'd like to emphasize, however, that the pathological features of this type of encephalopathy are not specific to whooping cough, there are many toxic agents which can produce this type of pathological lesion.

**Dr. Barsky:** Last night we saw a child who had an allergic diathesis and developed chickenpox



with associated encephalitis and death, and here we see a child with an allergic background (eczema) who developed pertussis and encephalopathy and died. What is there about children who have allergic diatheses that makes them prone to develop these terrible complications in an infectious disease? Does this point to all-out treatment in any patient who has eczema or who is an asthmatic and gets whooping cough or chickenpox? Should they be treated as if it is going to happen from the start?

**Dr. Medovy:** Are you asking this, or do you have the answer, Dr. Barsky?

**Dr. Barsky:** Certainly I haven't the answer. I was not previously aware that encephalopathy was common in allergic children who had infectious diseases.

**Dr. Medovy:** One of our problems in dealing with pertussis has been to prove the diagnosis. The bacteriologist has become a very important individual in this condition for this reason. Miss Norris has worked with these cases and has concerned herself with the problem of isolating the specific organism. Would you tell us what your experience has been, Miss Norris?

**Miss M. Norris:** *Hemophilus pertussis* is a small gram negative organism which resembles morphologically the *hemophilus influenzae*, but it is not pleomorphic and it tends to occur in the short bacillary form. On primary isolation *hemophilus pertussis* requires a very complex medium, such as that devised by Bordet-Gengou, which consisted of an extract of potatoes and a high fresh blood content (20-25%) with a little glycerine added. The *hemophilus pertussis* does not require the X and V factors that are so essential to the *hemophilus influenzae*, so that the cultivation in that respect is a little simpler. We are usually asked which type of specimen is best for the isolation of *hemophilus pertussis*. Formerly, the cough plate was the most popular method, but that has become somewhat obsolete. With very young children it is usually impossible to obtain a satisfactory cough plate, and even when a satisfactory one is obtained, there is extremely little growth of any type. Most workers agree at the present time that the nasopharyngeal swab, if it is properly taken, is the method of choice. Occasionally we get a throat swab for the isolation of the organism, and this is probably the most unsatisfactory of all for the reason that with so many organisms in the throat there is overgrowth of the very slowly growing *hemophilus pertussis*. This organism requires 3 to 5 days to appear, whereas other organisms growing from the throat require under 24 hours. As a rule penicillin is added to the Bordet-Gengou medium to inhibit the growth of other organisms. If, however, a child has been receiving antibiotics, we usually leave out penicillin in the medium.

We have recently isolated the organism from one child who had been receiving terramycin for 5 days and from this last child, the one who died who had received chloromycetin and more recently achromycin prior to the swab being taken, a growth of pertussis was obtained.

The identification of the organism is made by the cultural characteristics which are quite distinctive, and by an agglutination test, using hyperimmune serum. The organism can be distinguished from parapertussis by both cultural methods and by agglutination with antiserum. Antigenically they are distinct. I think one reason why we have not had a high percentage of bacterial recoveries recently in this hospital is that the children rarely come into hospital during the catarrhal stage, and it has been estimated that between 70 and 90% of patients with pertussis will give positive cultures during the catarrhal stage, but once they have reached the paroxysmal stage the percentage falls very rapidly and this is the stage the disease has reached in most of the children admitted here.

**Dr. Medovy:** As Miss Norris has suggested, there are some very disturbing things about the bacteriology of this disease. She isolated *hemophilus pertussis* from one child who had been treated with terramycin and from another who had been treated with chloromycetin and achromycin. Even more disturbing is the report of Silverthorne who isolated a phase I *hemophilus pertussis* from a child who had received not only three initial inoculations, but also five booster inoculations against pertussis. I think that in view of these doubts that have been cast as to the value of infant immunization, I will ask Dr. Grewar to review the report of the Medical Research Council of Great Britain regarding the value of pertussis immunization.

**Dr. Grewar:** This report was issued in 1951. Over 7,000 children between 6 and 18 months of age were selected, and they were divided into two groups. One group, "the vaccinated," were given pertussis vaccine. The other group "the controls," were given an anticatarrhal vaccine prepared from killed staphylococci, *neisseria catarrhalis* and *Corynebacterium Hoffmani*. This vaccine had a turbid appearance similar to that of pertussis vaccine, so the parents of the patients did not know which vaccine their child was receiving. This experiment was carried out in 5 different areas in England and various pertussis vaccines were used. Three were from the United States, 2 being from the Kendrick Laboratory in Michigan and the other from the Parke Davis Co., and 2 of the vaccines were of British origin prepared by the Glaxo Co. Now, for a period of between 2 and 3 years after these children were vaccinated, trained health visitors periodically visited their homes and at the end of the period of observation



the number of cases of pertussis that had occurred in the three years in these two groups were totalled. In the "control" group of over 3,000 there were 687 cases of pertussis, whereas in the "vaccinated" group of over 3,000 there were only 149 cases of pertussis. The study was further worked out in terms of the attack rate per thousand child months, and there was again statistically significant differences in the incidence between the "control group" and the "vaccinated" group. Even more striking was the attack rate in the two groups of children exposed to pertussis in their homes. Those who had been given the control vaccine had an 80% incidence of pertussis, whereas in the pertussis vaccine group there was an incidence of pertussis of only 18%.

Bacteriological studies were made on the patients who developed whooping cough, there being about a 90% coverage, and some 54% of those tested yielded bacteriological confirmation of the disease. The other interesting observation was, that, whilst it was concluded that all the whooping cough vaccines were significantly effective, there was a difference in the efficacy of the 5 different vaccines. The Parke Davis vaccine was reckoned poor, the two Glaxo preparations were also poor, and, by a quite notable margin, the two strains received from the Michigan Health Dept. (Kendrick strains) gave better protection. I may say that since this time health departments in the United Kingdom have used this Kendrick strain exclusively in the preparation of vaccine, as have other manufacturers. Some of the vaccines contained alum, and some were simple suspensions. Most of the injections were given intramuscularly, although in some areas they used the subcutaneous method, but there were no definite conclusions drawn as to the relative efficacy of these preparations or methods.

**Dr. Medovy:** There are many things about pertussis in this community worthy of further discussion. First, in view of the fact that most of the cases we have seen here occurred in a very young age group should we consider immunizing earlier in life? Should more attention be paid to the work that was done a few years ago on pre-natal immunization of mothers with the idea of having transferred through the placenta some passive immunity to the newborn and young infant. This seemed to work satisfactorily from the immunological point of view, but it was regarded as not very practical. The second problem that I think worth discussing is, whether something may not have happened to the vaccine. Is the vaccine deteriorating, or is it not being made up to the same standard, or are the strains of pertussis that are being used different? A few years ago we were all very worried about encephalopathy following the use of pertussis vaccine, and one or two members of the staff here decided to give up

immunizing children against pertussis. I think that these cases have now disappeared and it seems to me that for the last two or three years no one here has seen or reported a case of encephalopathy following pertussis vaccine. This may indicate that the nature of the vaccine has changed in this interval.

I think it would now be expedient to open the meeting for discussion.

**Dr. Grewar:** In the group of over 7,000 children I have reported from the whooping cough trials of the Medical Research Council there was not a single incidence of a convulsion or any neuro-pathic complication following immunization with the pertussis vaccines.

**Dr. Medovy:** Has anyone here seen a post pertussis vaccine convulsion in the last 2 or 3 years? For a time there were even editorials in the medical literature on this subject.

**Dr. Cadham:** would you like to comment on the outbreak in this city?

**Dr. Cadham:** We are not aware, Dr. Medovy, that there is any outbreak. We generally run one to two hundred cases of whooping cough a year, and so far this year there have been about 182 reported. We do see a seasonal variation, and usually the peak months are February, March and April. So, possibly, if there is going to be an epidemic, it is just getting underway. In 1943 we had 1000 cases with 9 deaths. In 1947 we had almost 600 cases and 6 deaths. It is quite true that this disease is a killer of infants, and many textbooks say that whooping cough causes more deaths in England and in the United States than measles, diphtheria, scarlet fever and tuberculosis combined. I think it very appropriate that you discuss age at which immunization should be performed, and, in this respect, I took the trouble to look up the ages of these children who died in 1943 to find that 5 of the 9 were under 6 months of age and the oldest was only 1 year old, and again in 1947 5 of the 6 deaths were under 6 months of age and the other one was only 8 months of age. This year I know of one other death besides the one which you have just described, and that was a two month old baby who died in the King George Hospital. Anderson, one of the leading epidemiologists in the United States, remarks that there are more deaths due to whooping cough at 2 months than any other time of life, and in many places in the United States they start immunization at 2 months of age. I cannot explain why the practice has developed to delay it until 6 months of age. I know that it is thought that no maternal immunity passes on to the offspring, and some immunologists think that the antibody producing mechanism does not function in infants under 6 months of age.

**Dr. Lansdown:** I don't think anyone knows sufficiently about immunity mechanisms in very

young infants, but, after all, if they will become immune to such things as smallpox, it is reasonable to presume that immunity processes will take place in infants under 2 months of age.

**Dr. Medovy:** As a matter of fact immune mechanisms have been studied by Osborne and Dancis in the New York Hospital. These workers reported on early immunization to tetanus, diphtheria, and pertussis. They found that as they went down the scale toward 2 months and 1 month of age they got poorer and poorer immune response. They were of the opinion that if you gave tetanus immunization you got a good response. Diphtheria immunization gave fair response, not as good as tetanus, but with pertussis they got a poorer response than with either of the other two.

I think the general practice, bearing in mind these studies, is now to start immunizing at 3 months of age. I wonder if there are any here who immunize earlier than this?

**Dr. Briggs:** Yes, we have started immunizing babies at a much earlier age, giving the first immunization at 6 weeks. This is based on a leading article in the *Lancet* which reviewed experimental evidence from various centers, suggesting that one can, undoubtedly, raise the immunity to whooping cough, diphtheria and tetanus starting at 1 or 2 months of age.

**Dr. Medovy:** Dancis, whom I have already quoted, was of the opinion that in the case of tetanus and diphtheria many infants carried passive immunity from the mother and that these passive antibodies interfered with the action of any antigen you might introduce, so that until about 3 months of age, when passive immunity gradually faded, the response to any antigen is poor.

**Dr. Briggs:** It is since we have been running across cases throughout the city, of pertussis, that we decided in favor of early immunization and, possibly, further injections in the form of boosters to try and give these babies the early protection that has been mentioned. One other thing that I would like to mention is, that it is difficult to diagnose pertussis. I can't diagnose it in the early stages. I might also mention that, whilst we have talked of mortality, there is another aspect to pertussis, one of morbidity, and it is reported that pertussis is the commonest single cause of bronchiectasis. This is something which we must all bear in mind, if an epidemic is to occur this year.

**Dr. Israels:** I don't think it's surprising that bacterial immunity is slower to develop. When you immunize against tetanus and diphtheria you are immunizing to the toxin, whereas when you immunize against substances in the bacterial cells the immunity is never very good, the single exception being perhaps in the typhoid group. That

is why you don't have good vaccines against pneumonia, and I think this is a general bacteriological principle. Now, I have a question for Dr. Hoogstraten. If he doesn't find any pathology in the trachea, what is the cause of the cough? I would also like to ask Miss Norris if she tests the organisms for sensitivity to various antibiotics, and if so, if this is a routine test of any value.

**Miss Norris:** It takes 7 days longer.

**Dr. Medovy:** So far as antibiotics and pertussis are concerned, one gets the impression from the literature that almost any antibiotic will clear *Haemophilus pertussis* out of the nasopharynx. In view of the difficulty of growing the organisms in any case, however, after the second week you'd think it wouldn't matter much whether you've used antibiotics or not. The symptoms from then on appear to depend on mucosal damage. Dr. Hoogstraten, can you explain the cough in the absence of laryngotracheal pathology?

**Dr. Hoogstraten:** I don't think it could be explained on the basis of the microscopic pathology or the morbid anatomy of the lesion. Certainly, we see other diseases, for instance, laryngotracheobronchitis, which produce considerably more pathology in the tracheal and bronchial mucosa and do not have the same type of paroxysmal cough that you see in a whooping cough.

**Dr. Lansdown:** There are a certain number of children who during the process of being vaccinated against pertussis do develop a cough, and there is some feeling that the toxins which are presently in the vaccine, which is a suspension in liquid medium may produce the cough by a central effect rather than a local one. There is no doubt that the type of vaccine makes a great deal of difference. One of the vaccines used locally is in a liquid synthetic medium (the organisms are killed, but their products are actually in the vaccine, which is usually combined with the toxoid of diphtheria and tetanus.) The tremendous variation in the method of preparation of vaccines is, I think, increasing the difficulty in evaluating the various results that are obtained. Undoubtedly, vaccine does not protect in all instances. I have had occasion in the Swan River area to do a house to house canvass following a moderate sized epidemic in that district, and there were all gradations from apparent complete protection to extremely severe disease and in all instances the individuals had been immunized and had received booster doses (one at least). Dr. Medovy, would you say something about the use of immune globulin for small infants who have siblings with suspected whooping cough.

**Dr. Medovy:** I don't know of any work which proves that immune globulin helps in any way. There has been work showing that in any adult serum you examine the gamma globulin fraction does contain antibiotics against pertussis, and it

is difficult to understand why this cannot be transferred to the baby and why the infant is so susceptible to the disease.

Has anyone here had experience with gamma globulin or hyperimmune gamma globulin for pertussis?

**Dr. Grewar:** We have used pertussis hyperimmune gamma globulin therapeutically on only two occasions, and, certainly, no beneficial result has been demonstrable. One of the cases was the child reported here today who died, and we used it also on a very young baby who had a most distressing whoop, and was becoming progressively more and more embarrassed. Here again there was no appreciable effect. It is being used also in the Out Patient Department in the prophylactic sense where we give it an effort to protect the siblings under 1 year of age of a child, the subject of pertussis. It is, however, too early to assess our results.

**Dr. Grant:** I don't think we can say how effective this measure has been, but I was wondering about the value of giving to children, who have had a course of vaccination and had been exposed to pertussis, a booster dose of pertussis vaccine. Is this of any value considering the fact that these children do quite frequently develop pertussis in spite of their vaccination.

**Dr. Medovy:** I think that it is the right thing to do. You may have given the three injections and even given the child a booster two or three months previously, but if there has been a definite exposure then the child should come in for another booster.

**Dr. Martin:** I think the arguments against that have been two. The first is that one really has no idea how long it takes to boost the immunity, and the second is the very real danger of precipitating an encephalitis by giving the injection after the child has been exposed.

**Dr. Medovy:** Even a very small dose of a booster will apparently raise the immune level very quickly. I have not heard of encephalitis occurring as a result of a booster dose when the child is exposed. Have there been cases reported, Dr. Martin?

**Dr. Martin:** Yes. At the time we were seeing encephalitis associated with vaccination against pertussis, this was one of the things that was reported.

**Dr. Medovy:** I have, certainly, given many boosters under circumstances just like that and have never had any trouble. I have one further remark to make concerning the vaccine. I understand at the Connaught Laboratory in Toronto a great deal of work is going on to try to determine just why there is an increase in the incidence of pertussis, apparently, in spite of the widespread use of pertussis vaccine. I would like to quote from a letter I received from Dr. R. J. Wilson,

Research Associate in the Connaught Medical Research Laboratories.

"Your observation regarding the high incidence of pertussis has been repeated to us from other parts of Canada as well as locally in Ontario. First, in regard to potency, each lot of vaccine prepared by the Laboratory is checked for potency against the standard distributed by the Division of Biologics Control, National Institutes of Health, Bethesda, Maryland. No lot is released which does not conform to the standards of testing, which they have set forth. In addition, our vaccines are checked by us from time to time against those produced by other manufacturers. The laboratory of Hygiene in Ottawa makes additional checks in our vaccines, as well as those distributed by all other manufacturers in Canada. In regard to the development of new strains we have received and examined over the past several years a number of strains from local sources as well as elsewhere and have not been able by the methods presently available to demonstrate unusual strains. Freshly isolated strains are being introduced regularly into vaccine production. In regard to the possible increased incidence in immunized children we had a survey made over a period of 1 year with the cooperation of the Medical Officer of Health in two counties. While we are quite aware of the deficiencies in this type of survey, the percent reduction shown is in the range found in the report of the Medical Research Council in Great Britain in their controlled field trials. We feel that data of this type is a more accurate assessment of the situation than impressions."

I think it would now be well to devote some time to the treatment of the disease. In so far as the cough is concerned I think a lot of the old combination of ether and olive oil, a teaspoon of ether in a tablespoonful of olive oil administered by rectum. You must of course warn the mother then she will smell ether from the mouth in about two minutes. If you don't, she will think the enema has gone too far! The ether is excreted by the pulmonary epithelium and has an anesthetic effect. This is especially useful in the treatment of a tiny baby who is vomiting a great deal and is in bad shape.

**Dr. Popham:** I would like to know what other people's experience has been in using ascorbic acid in the treatment of whooping cough.

**Dr. Medovy:** There was a rather unhappy drama of medicine in Winnipeg many years ago when somebody got the idea that whooping cough occurred in children who were a little low in Vitamin C. Quite a lot of excitement was created by it, so that mothers were going down to the Medical College in droves with children in one hand and winchesters full of urine in the other, so as to have the urine analysed for Vitamin C. The children were then given great, big doses of



Vitamin C. The interesting thing was, that if you did give Vitamin C for two or three weeks all those children got better. This used to make the late Dr. Chown very angry because, of course, all children with whooping cough gradually get better, and anything that is used in the third or fourth week is likely to seem to produce an improvement.

**Dr. Popham:** I would like to take exception to that. I think of the very small infants, at least, half were markedly helped within a matter of days.

**Dr. Medovy:** There is no real scientific evidence for the use of Vitamin C in pertussis, but, perhaps, there is an increased demand for Vitamin C during this disease. It should be capable of proof, but so far this has not been forthcoming.

**Dr. McNeil:** The basis of the therapy was that Vitamin C produced an acidosis. This is not unlike what would happen if children were taken up in an aircraft to 10,000 feet or put in a decompression chamber and acidosis produced. This was supposed to relieve the cough.

**Dr. McLandress:** The experience of the King George Hospital has suggested that the course of whooping cough is not affected at all by any of the antibiotics. However, I continue to use chloro-

mycetin, especially, early in the disease, and, particularly, if younger children are developing signs and symptoms after definite exposure to pertussis. I am sure that chloromycetin has a place in preventing or treating many of the secondary complications of whooping cough. I may say that so far as the hyperimmune serum is concerned one of the most severe cases of pertussis that Dr. Day and I saw some years ago responded so well to this preparation that we used it frequently.

**Dr. Medovy:** I am afraid we will have to draw to a close, but there is a very good study on this whole matter of antibiotics and pertussis by Hattie Alexander and her group in New York City. The final opinion was that no matter what antibiotic you used, you could get rid of the hemophilus pertussis during the catarrhal stage, but, once the paroxysms had set in the only value of the antibiotics was in preventing complications. I don't know how you can diagnose pertussis before the paroxysmal stage, unless, of course, you get nasopharyngeal cultures from every baby with a cough.

#### References

- Lancet—I: 1109-1112, June 6, 1953.  
Pediatrics—II: 323-337, April 1953.  
B.M.J.—I: 1463, June 1951.

### "Problems of the Newborn Infant"

#### Proposed Premature Follow-up Project

The Department of Paediatrics of the Medical Faculty, University of Manitoba has received a Dominion-Provincial Grant to undertake a study of 1000 prematures born in the Maternity Pavilion of the Winnipeg General Hospital from its opening in 1950 to the end of 1955.

The objective of the study is to obtain information in regard to physical, mental and emotional development in this group of infants and the incidence of congenital defects, cerebral palsy, hearing loss, visual defects and acute illness. Very few such studies are in existence. Medical opinion in regard to the fate of the premature varies all the way from excessive optimism about the final outcome to actual doubt that the salvage of tiny infants is really worthwhile. From Bristol comes information that 53 of 76 infants born weighing 3 lbs. 4 ozs. or less were completely normal on later review. Hess in Chicago reviewed 9022 infants graduated from the Premature Nursery at the Sarah Morris Home over a 20 year period. 445 infants weighed 3 lbs. or less at birth. Of these 95% were found on careful study to be normal physically and 90% normal mentally. Out of 7000 prematures (5½ lbs. or less) Mary Crosse in Birmingham found only 2 mental defectives.

In the Winnipeg study the clinical hospital records will be reviewed first. It is then proposed

to have the City Health nursing division visit the home by appointment and obtain the necessary information indicated above. In those relatively few cases where difficulties have arisen in the physical or mental development contact will be made by the Study Group with the child's physician for necessary details. Opportunities will be available for psychometric or audiometric examination in selected cases where this information appears to be of value in the appraisal of the child's status. This will be done with the consent of the physician and parent and at no expense to the family.

When this information is assembled we should have a clear picture of the "fate of the premature" in this area. It is hoped that careful study of these infants presenting deviations from normal may reveal deficiencies in treatment or management which are correctable and may lead not only to lower death rates among tiny prematures but to improved physical and mental health among the survivors. The co-operation of the medical profession of the Winnipeg Area is requested in this study.

This work will be done with the collaboration of Dr. J. K. Martin, assisted by Dr. Kenneth Wylie, senior resident, Children's Hospital.

Harry Medovy, M.D.



## Clinical Luncheon Reports

### Grace Hospital

Department of Obstetrics and Gynecology  
November 22, 1955

Chairman: Dr. Walter McCord, M.R.C.O.G.,  
F.R.C.S. (C)

### Ectopic Pregnancy Ovarian, Interstitial and Tubal

Case No. 1: Reported by Dr. Roman Wengel.

#### Multiple Obstetrical Rarities in One Patient

"In February 1951 Mrs. C., age 21, had a spontaneous miscarriage at 4 months, presenting an abnormal fetus with the heart outside the chest wall. After the miscarriage D & C was done for retained products of conception.

In February 1952 Mrs. C. was delivered with a normal 8 month baby boy—birth weight 5 lbs. 14½ oz.

On January 29, 1953 she consulted me at my office complaining of lower abdominal pain. Her menstrual periods were normal. On pelvic examination the uterus was normal in size and position, but there was a mass the size of a small egg in the region of the left adnexa. She was asked to return in 3 weeks. On examination it was found that the mass had grown rather rapidly to the size of an orange. Laparotomy was advised and, on March 5, 1953, performed. It revealed an ovarian cyst the size of a large orange free from any adhesions. Left oophorectomy, left salpingectomy were performed."

Dr. J. Hoogstraten then presented photographs of the ovarian pregnancy and demonstrated how this case fulfilled the criteria for ovarian pregnancy by Spiegelberg. (See Dr. Kobrinsky's remarks.)

"On June 20, 1955 the same patient appeared at my office with the history of missing a period, L.M.P. being May 12th. Pelvic examination revealed an enlarged pregnant uterus and normal right adnexa. She was advised to return in 3 weeks. Apparently she had a slight abdominal pain later but not severe enough to prevent her from going on a holiday to West Hawk Lake.

On July 20, three days before returning to Winnipeg she noticed some vaginal bleeding and some abdominal pain. She consulted a local doctor, and was advised to remain in bed. Next day her abdominal pain became very severe and she collapsed and was rushed to the local hospital. The next morning she was transferred by ambulance to the Grace Hospital with the diagnosis of ruptured tubal pregnancy. She arrived at Grace Hospital in severe shock and poor general condition: Pulse 140, B.P. 108/64, Hgb. 33%, R.B.C. 1,750,000. She had tenderness all over the abdomen and rigidity in the lower quadrants.

Continuous blood transfusions were started and laparotomy performed.

The abdomen was filled with blood. When I lifted the uterus there was a large gaping hole in the left upper quadrant of the body of the uterus, which was bleeding quite freely. There was some placental tissue in that region and a thin umbilical cord. Following the cord I found a fetus approximately 10-11 weeks gestation among the intestines. Taking into consideration the ragged rupture of the upper part of the uterus, repair was unthinkable, and a sub-total hysterectomy was performed. The right ovary and tube were normal.

The patient developed a paralytic ileus on the fourth day but responded to a Miller Abbott tube and prostigmine."

The pathological specimen was then described by Dr. Hoogstraten, who was of the opinion that this represented an interstitial pregnancy in the remaining fragment of the originally excised tube.



Drawing from photograph of actual specimen of ovarian pregnancy. (Photo by Dr. J. Hoogstraten, drawing by Mr. Grant Ross, medical illustrator).

Case No. 2: Reported by Dr. E. M. W. Stuart, M.B., B.Ch., B.A.O., Resident Physician and Surgeon, Grace Hospital

"Mrs. Lena G., age 45, was admitted to the public service July 15, 1955 by referral from her attending physician, as a case of undiagnosed abdominal pain.

### History of Present Condition

Three weeks prior to admission patient complained of an attack of acute abdominal pain starting in both loins and radiating across abdomen. This only lasted about three hours, but was associated with vomiting.

Recurrence of pain two days later, followed next day by onset of menstruation lasting five days, which she considered to be a normal period.

At this time she was admitted to St. Boniface Hospital where a diagnosis of pelvic inflammatory disease was made.

On the evening prior to admission to Grace Hospital, the pain recurred with further vomiting, and another attack occurred on the day of admission whilst in her own doctor's office. The doctor diagnosed abdominal pain of unknown origin but probably pelvic.

### Gynaecological History

1950 operation, probably for suspension of womb.

Periods always irregular 21-27/4-5. Last normal period in March 1955.

April 1955, some spotting but no true menstruation.

May 1955, passed clots after taking pills given to her by doctor in Toronto. This lasted 6 days. She feared she might be pregnant at this time.

June 1955 no menstrual period.

July 1955, on first day attacks of pain followed by menstrual flow described in history of present condition.

Patient is mother of 9 children aged 18-28. Separated from husband for some years.

No complications of labour—except last child was "dry birth."

### On Examination

Patient is pale, anxious woman.

Respiratory system—no apparent disease.

Cardio-vascular system—no apparent disease.

Abdomen—Tenderness and rebound tenderness over lower abdomen in both lower quadrants. Generalized rigidity.

Pelvic—Very tender mass in posterior fornix about size of orange or larger. Unable to visualize cervix because of pain on inserting speculum. Cervix feels soft. Corpus not defined.

### Laboratory Findings

July 15/55 Hgb. 64%, W.B.C. 13,000, ESR 87 mm/hr.

July 17/55 Hgb. 67%, W.B.C. 9,900

Urinalysis essentially negative.

Patient ran low grade pyrexia up to date of operation which fell on third post-operative day and remained normal.

### Operation July 18/55

1. Posterior Colpopuncture—revealed old blood.
2. Laparotomy—revealed considerable old blood and blood fibrin adhesions about bowel and both

adnexae. Left tube greatly distended and in Pouch of Douglas. Left tube resected and pedicle sewn to left cornu of uterus. Right tube bulbous at tip indicating previous salpingitis. Both ovaries appeared normal.

### Post-operative Course Uneventful

**Final Diagnosis:** Ruptured tubal ectopic pregnancy.

### Discussion — Dr. Sam Kobrinsky

These two cases bring to mind very interesting theoretical, clinical and pathological considerations.

In the case reported by Dr. Stuart, we have an interesting clinical problem, in that here was a woman whose age would almost place her outside the childbearing or reproductive period. We do not know what the findings were when she was first admitted to St. Boniface Hospital. It is not difficult to see how they would be misled by her age, particularly if no pelvic mass had as yet developed. As you know, the key to the secret of success in the diagnosis of ectopic pregnancy lies in keeping that possibility constantly in mind in any woman of reproductive age with any disturbance of menstruation. If one does so, there is less chance of missing the ectopic pregnancy that presents with vague complaints and equivocal signs of pelvic examination.

Early diagnosis is very difficult, as often initially there are only signs of early pregnancy or threatened abortion of an intrauterine pregnancy. There may be few or no characteristic symptoms until intra-abdominal bleeding occurs from rupture of the tube or abortion of the tubal pregnancy with blood and products of conception being extruded from the end of the tube. The characteristic symptoms and findings then develop rapidly and may mimic any disease of the lower abdomen, occasionally of the upper abdomen, and rarely even disorders of the chest.

In the slowly developing case, the most valuable pieces of evidence are as follows.

1. A history of slight uterine bleeding or brownish discharge after a period of amenorrhea in a woman in the childbearing age.

2. The finding of a tender mass in the true pelvis.

3. Pain on moving the cervix.

Without at least one of the above findings, I don't believe it possible to positively diagnose ectopic pregnancy.

Of secondary aid in the diagnosis are colpotomy and laboratory findings. Colpotomy was carried out in this case and gave good evidence of at least some pathological condition requiring laparotomy. Positive findings are aspiration of unclotted or unclottable blood or serum. It is not an absolutely diagnostic sign, however, as blood may be present in the pelvis as a result of bleeding from any

other abdominal organ. Blood can be aspirated from pelvic blood vessels as well.

One can get a falsely negative cul de sac aspiration owing to a localization of the blood clot which the needle misses. It may also be due to failure to perforate into the peritoneal cavity, or the presence of excessively large clot due to rapid bleeding.

However, it is a useful procedure in that a positive aspiration can swing the diagnosis in cases where the history and physical signs are dubious. In other words it has to be considered together with the whole picture in each individual case.

Dr. Wengel's case is of course extremely interesting from a pathological point of view in that here we have a patient who presented twice—each time with the rarest form of pregnancy.

The ovarian pregnancy in this case is authentic in that it fulfills all the criteria laid down by our old friend Spiegelberg—namely:

1. Normal tube unconnected with the ovary.
2. Gestation sac occupying the site of the ovary.
3. Definite ovarian tissue present in wall.
4. Ovary connected to tube by a mesentery.

Some two hundred cases have now been reported in the literature. There is considerable speculation regarding the mode of fertilization and implantation in these cases.

Novak states that implantation is not necessarily within the follicle from which the ovum was discharged. The most common mechanism is probably through implantation of the ovum in the cortex of the ovary as this tissue is the most potentially metaplastic.

Curtis believes that the ovum leaves the ovary, enters the tube where it becomes mature enough

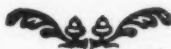
to be fertilized, then is regurgitated back onto the surface of the ovary where it becomes implanted.

The clinical picture is essentially the same as with tubal pregnancy, as is the treatment.

Her second episode with rupture of the uterus at its angle on the same side allows for some speculation as to whether this was an interstitial pregnancy as reported by Dr. Hoogstraten, i.e. a pregnancy occurring within the portion of the uterine tube lying in the uterine wall—or an angular pregnancy, i.e. implantation in the uterine endometrium near the site of the entry of the tube.

The occurrence of this subsequent ectopic pregnancy leads to a consideration of the best surgical management of cases of tubal or ovarian pregnancies. In general, our aim in gynecological surgery is to be as conservative as possible. However, it is felt by some gynecologists that, in a woman of low fertility, the aim should be to leave her with as great a chance of further intra-uterine pregnancy, as possible. This can best be accomplished by removing the ovary on the same side as the damaged tube. The reason for this is that if the ovary is left, approximately half of the ova discharged by that patient's ovaries will be wasted. The chance of ova discharged on the side where the tube is absent migrating to the other side are slight. With the one ovary only remaining where the healthy tube is, it takes over the function of monthly ovulation, and thus chances of successful pregnancy are increased. In other words in this instance, Jeffcoate states, "It's better to put all the eggs in one basket."

Finally, when removing a tube damaged by ectopic pregnancy it is important to try and leave no open stump near the uterine wall as this favors the possibility of a future dangerous interstitial pregnancy.



# "Hylenta"

**CD\* tablets**

(No. 898—500,000 I.U. Penicillin G Potassium)

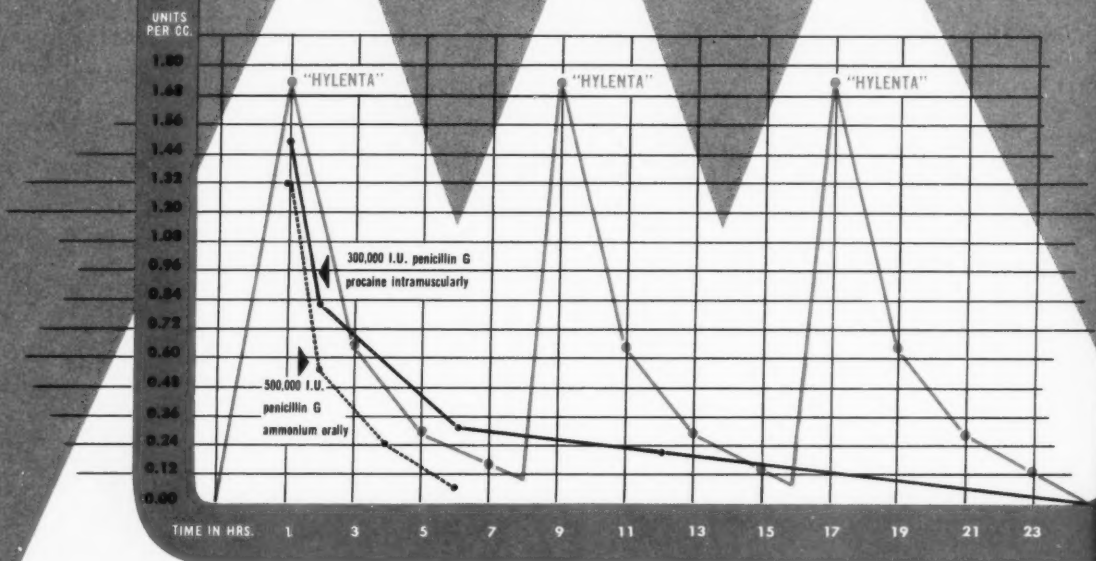


## CONTROLLED DISINTEGRATION

- prevents** penicillin destruction in the stomach
- ensures** penicillin absorption in the upper intestine
- produces** higher average blood levels than reported for any other oral penicillin
- provides** therapeutic blood levels consistently for 7-8 hours.



*Controlled Disintegration is accomplished by the unique tablet base (developed in the Ayerst Research Laboratories) which is virtually acid insoluble, although rapidly soluble in alkali media.*



Note that three "Hylenta" Tablets daily produce a higher average blood concentration than 300,000 I.U. procaine penicillin intramuscularly.

Ayerst, McKenna & Harrison Limited, Montreal









## Medical History

### The Last Days of Ian Maclaren\*

I. Maclaren Thompson

B.Sc., M.B., Ch.B. (Edin.), F.R.S.C., F.R.S.E.  
Professor of Anatomy and Chairman of the Department  
University of Manitoba

*There grows a bonnie brier bush in oor kailyaird*  
(Old Scottish Song)

#### Introduction

About the beginning of the present century, many readers on both sides of the Atlantic revelled in the Victorian sentimentalism and pawky humour of the Kailyard School of Scottish writers. Though something is lost in translation, the word "kailyaird" may be roughly Anglicized into "cabbage patch". The Kailyard School comprised three authors who wrote quaintly of life in rural Scotland: Sir James Barrie, S. R. Crockett and Ian Maclaren. Two of them had interesting "double personalities". In his St. Andrews rectorial address on *Courage*, Barrie has given us a delightful revelation of M'Connachie. Ian Maclaren was the pen-name of the Rev. John Watson, D.D.; this gentleman's dual nature will receive some attention as we go along. Even among medical men this phenomenon is not unknown: one thinks at once of Osler with his Egerton Y. Davis, and of a recent letter to the editor of the Manitoba Medical Review signed M. Y. Alterego!

Few now recall that the last days of Ian Maclaren were spent in this part of the world. To those unfamiliar with the man and his writings, discussion of those days would be pointless without a brief sketch of his life and works.

#### Biographical Sketch

Although a thoroughbred Scot of Highland stock and sympathies, Watson was born at Manningtree, Essex, in 1850. His boyhood was spent in Perth and in Stirling; at sixteen he entered the Faculty of Arts of the University of Edinburgh. According to his friend and biographer, Sir William Robertson Nicoll, Watson gained no great distinction at the University, a circumstance shared with his fellow student Robert Louis Stevenson. After his Arts course he pursued theological studies at the New College, Edinburgh, concluding with a semester at Tübingen. Returning from Germany in 1874, Watson became assistant minister at the Barclay Church, Edinburgh, an appointment soon relinquished in favour of a call to the Free Church in Logiealmond, Perthshire. His three years in Logiealmond laid the foundation of the best known books by Ian Maclaren. The next triennium was spent as joint minister of Free St. Matthew's Church, Glasgow; during this period he married Miss Jane Ferguson of that city.

In 1880, when not quite thirty years of age, Watson accepted a call to Sefton Park Church, Liverpool (Presbyterian Church of England). There for the next quarter of a century he conducted a distinguished ministry, wrote books, delivered numerous lectures and addresses, and engaged in the multifarious activities of a successful city clergyman. Early in 1896 the University of St. Andrews conferred the degree of Doctor of Divinity upon Watson, and later in that year he received the same degree from Yale University when he delivered the Lyman Beecher Lectures there. On this trip he lectured in several other cities, including Ottawa. Three years later Watson undertook an extensive lecture tour in North America, crossing the American Rockies in Colorado, and returning through the Canadian Rockies. His impression of the latter is indicated by the following sentence in one of his letters: "As we passed through the Selkirks and the Rockies, so marvellous are the works of nature in this region for grandeur and beauty that we both agreed that nothing we had seen in Switzerland could for one moment be compared with what awaits the traveller between Vancouver and Calgary, on the Canadian Pacific." This 1899 tour included Winnipeg. During the year 1900-01 Watson was Moderator of the Presbyterian Synod of England. Subsequently he took an active interest in the transformation of University College, Liverpool, into the University of Liverpool, the Principal of which after the first World War was J. G. Adami, the well-known McGill pathologist.

In 1905, upon completing a quarter of a century at Sefton Park Church, and when only fifty-five years of age, Watson resigned his supremely successful pastorate, to the consternation of his many admirers. He desired relief from responsibility for a congregation, but continued to preach as occasion offered, to write and to lecture. Accompanied by his wife, Watson embarked upon his third North American lecture tour in February 1907, the terminal phases of which constitute our main subject. But first a little about his books, and what they reveal of the man.

#### Writings and Personality

His chief works fall into two strikingly different groups: (a) the religious writings of the Rev. John Watson, D.D., bearing such titles as *The Mind of the Master*, *The Potter's Wheel*, and *The Cure of Souls* (the Beecher Lectures at Yale); (b) the Scottish idylls of Ian Maclaren, exemplified by *Beside the Bonnie Brier Bush*, *The Days of Auld Lang Syne*, and *Kate Carnegie*. A couple of books belong in neither group: a historical study of *The Scot of the Eighteenth Century* (by John

\*Read before the Medical History Section of the Winnipeg Medical Society, February 22, 1956

Watson, D.D.) and a historical novel, *Graham of Claverhouse* (by Ian Maclaren); both were published posthumously. The pen-name Ian Maclaren consists of the Gaelic form of his own first name followed by his mother's maiden name.

The best loved of all his characters was Dr. MacLure; Watson could never have conceived this personality had doctors not stood high in his regard. He seemed to think of our profession as in some ways a model for his own. Not by chance did he entitle his Beecher Lectures "The Cure of Souls". Elsewhere he wrote: "The high honour of doctors, who carry in their breasts so many social tragedies, is an example to be followed by the clerical profession." Again, "It is with us, as with the medical profession, a rule to patent nothing, but to offer every discovery for the use of our brethren." But what do we think of this? "Our attitude to self-appointed religious speakers, and that of the medical profession to quacks, is a striking contrast. We, as a rule, welcome this assistance, in the public interest, and the doctors will have none of it, also in the public interest. Both professions are quite unselfish. Which is in the long run right?" In "The Cure of Souls" Watson deals in a strikingly modern way with what might be called the medical aspects of the ministry. For instance:

"... The spiritual prosperity of a congregation depends very largely on the minister being not only sound in doctrine but also sound in body... One ought indeed to be thankful that Christ chose as His first apostles men not only of conspicuous spiritual genius, but also of a hardy, natural, wholesome habit of life—fishermen, and such like—and that of the four Gospels... three proceeded, directly or indirectly, from those weatherbeaten Galileans, and the fourth from a physician... The body is a factor in thinking, as well as in pulling ropes and forging iron... It is, however, possible to be exasperatingly healthy, and one can understand a much tried woman being driven away from a minister whose radiant unlined face showed that he had never known pain, and who had married a rich wife, and taking refuge in a church whose minister had a liver and preached rampant Calvinism... If his digestion be bad, then he goes into the pulpit and hits viciously at some heresy or mourns the decay of morals. The people, who have been expecting a glimpse of heaven, go home in despair. The saints lament the degeneracy of the times, and the young people resolve that they will have nothing to do with religion... Every church should have a physical examination at the entrance to the theological college and only admit those men who would have passed as first class lives with an insurance company."

Though not to be taken literally, the foregoing illustrates Watson's vigorous thinking and writing,

and his attitude toward Medicine.

Concerning Dr. MacLure I shall resist temptation, and be brief. "Beside the Bonnie Brier Bush" is divided into five sections, of several chapters each. The last section is entitled "A Doctor of the Old School," and MacLure of Drumtochty is its hero. Here he is, in one magnificent Watsonian sentence: "He did his best for the need of every man, woman, and child in this wild, straggling district, year in, year out, in the snow and in the heat, in the dark and in the light, without rest, and without holiday for forty years." Manitoba, too, has known and loved such doctors. So popular was MacLure in his day that "A Doctor of the Old School" was republished separately. This is the conclusion of a letter from the medical men of Boston, Mass., at the end of Watson's first North American tour; he could not manage to attend a reception and dinner that they wanted to give in his honour: "... We beg that you will accept these roses and the accompanying letter as a slight token of the warm place you occupy in our hearts, and of our high appreciation of your beautiful tribute to our profession in the 'Doctor of the Old School'."

Here is a facetious certificate that Watson sent to a friend,

"August 27th, 1898.

I hereby certify that I have examined Mr. Maclaren, and find that he is suffering from slight tendency to obesity, that he is apt to go sleepy about 11 p.m., and that the drowsiness has not always departed at 7 a.m., and that his appetite is about normal. I take a favourable view of the case, and believe that by a course of mild mountain ascents Mr. Maclaren's health may be restored.

John Watson, M.D., F.R.C.P."

This treatment of himself as two different persons brings us back to the dual nature of the man, that we have already seen expressed in his books. It seems to me that Ian Maclaren described life as idealized by himself, whereas John Watson discoursed upon what to him were life's sternest realities. He was passionately religious, even mystical, yet were his feet firmly planted on this earth, and he knew the ways of men. Watson commented on this in one of his letters: "The Bible often seems to be in two minds, and we also not only may be but ought to be in two minds, hoping with all our might, yet laying to heart the awful permanence of character." Not only had Watson two ways of writing; he had also two ways of speaking, namely, preaching and lecturing. We shall trace this duality through his last days, to which we now proceed.

#### Last Days

Watson lectured in Winnipeg on Friday, April 12, 1907. Since that proved to be his second last lecture, delivered within a month of his death, and the last of which any details are available, it



may be of interest to dwell on it a little, drawing upon the files of the Manitoba Free Press (now the Winnipeg Free Press)\*. The Free Press of April 13, 1907, contains a detailed report of the lecture and of an interview with the lecturer at the Clarendon Hotel. The following remarks by him at the interview are quoted verbatim.

"We experienced considerable difficulty in reaching the city for the lecture this evening. In northern Michigan we were tied up for three days by a snowstorm. It was exceedingly severe, and owing to the delay we were compelled to cancel three of our engagements. I was to have been in Portage la Prairie last night, and was afraid that we would even be compelled to cancel the date in Winnipeg. We travelled two days and two nights in order to reach here today . . . When we leave the city we are to go down into Montana where there is wonderful natural scenery which I am very anxious to see. Then we go on the way east."

Watson lectured to an audience of "two thousand or more" in the Central Congregational Church (demolished in 1936). His title was advertised as "The Scot of the Eighteenth Century." He had given a series of lectures on this subject at the Royal Institution (London) in 1902, and again at Cambridge in 1905; as already mentioned, these were published after his death. According to the Free Press: "Rev. Dr. Patrick presided, and introduced the lecturer. Canada, he said, was a country in which the unexpected happens, and as an instance of the truth of this he found himself in Winnipeg, introducing to a Winnipeg audience the man who many years ago in Scotland presided at his ordination!" The Rev. Dr. Patrick was Principal of Manitoba College, subsequently incorporated into United College. Actually Watson changed his mind, and lectured with enthusiastic acceptance on Scottish humour. The long account in the Free Press on the day after his death stated that "On the lecture platform Dr. Watson had an engaging personality. He was tall and strongly built and as vigorous looking as a college athlete. He looked, in fact, much like Carlyle said Macaulay looked 'as if he were made of good oatmeal'."

Watson's next engagement was at Valley City, North Dakota, a town of some six thousand people just over two hundred miles south of Winnipeg. A few years ago Mr. Vandestreek, of the Valley City Evening Times-Record, kindly took considerable trouble to afford me access to the files of that newspaper covering the period of Watson's visit. It was a surprise to discover that he was advertised to lecture at Valley City on Thursday,

April 11, the very day on which, according to himself, he was to have been in Portage la Prairie! Evidently that Michigan snowstorm led to no little confusion. The postponement was duly announced, however, and the lecture was eventually advertised for Saturday, April 20, a week after the Winnipeg lecture. In the Winnipeg interview quoted above Watson spoke of his plan to go to Montana from Winnipeg. He must have decided to fill in the week between the two lectures with a journey of some hundreds of miles to see the Montana section of the Rocky Mountains (and probably Yellowstone), then back to Valley City. Before reaching Valley City he developed a sore throat, but he kept his engagements to lecture on Saturday, April 20, and to preach on Sunday; he also addressed the Normal School students on Saturday morning.

In view of Watson's change of major activity from the pulpit to the platform, it is interesting to consider what happened in Winnipeg and in Valley City. In Winnipeg he lectured but did not preach, and the lecture was acclaimed. In Valley City he both lectured and preached; this was his last lecture and his last sermon. Evidently the newspaper writers were so impressed by the sermon that they omitted to mention even the title of the lecture; nor, oddly enough, was it stated in the advertisements. But the Times-Record of Monday, April 22, contained both a report of the sermon and an editorial on it, the latter under the significant caption "The Dual Nature of Man." According to this editorial, "The spirit which pervades the 'Doctor of the Old School' pervaded the sermon." The day after Watson's death, the same paper returned again not to the lecture but to the sermon:

"Dr. Watson's last sermon was said to be one of the best efforts of his life. Many people who had heard him before, both at his home church in Liverpool and other churches, said it was the best sermon they ever heard him preach. In any event, it is something that is heard but once in a lifetime and the last sermon of Ian MacLaren will not be forgotten by those who heard it."

That was written under the emotional impact of a recent death; nevertheless, considering the remoteness of Valley City from Liverpool, the fact that many people heard him preach in both places is surely a remarkable tribute. It does seem that, after all, his best work was done in the pulpit.\*

Watson was next due for a course of lectures at the Iowa Wesleyan University in Mount Pleasant, Iowa, some five hundred miles south-east of Valley City; the journey was made via Minneapolis. Dr. and Mrs. Watson reached Mount Pleasant on Tuesday, April 23, and stayed at the Brazelton Hotel. By this time his sore throat had developed into a serious illness, and lecturing was

\*The facilities and courtesy extended to me in the library of this newspaper are much appreciated.

\*In the discussion following this paper, a senior member of the Medical History Section delighted us by actually recalling the substance of a sermon that he heard Watson preach in Liverpool in 1901—another remarkable tribute to his preaching.

out of the question. His condition fluctuated for about a fortnight, then deteriorated, and he died in his hotel room on Monday morning, May 6, 1907. The English-speaking world was shocked by the news of this sudden, tragic death. Mrs. Watson accompanied the remains of her husband all the way from Mount Pleasant to Liverpool, where the city gave him a great public funeral. At the graveside pipers from the Liverpool Scottish Volunteers played the Highland lament:

*The trout will come back from the deeps of the sea,  
The bird from the wilderness back to the tree,  
Flowers to the mountain and tides to the shore,  
But he will return to Lochaber no more.*

Vague and conflicting statements have been made concerning the nature of Watson's illness. Fortunately the Manitoba Free Press of May 7 contains a press dispatch dated May 6 that is so clear as to bear quoting (in part).

"The illness which was declared to be tonsillitis progressed favourably. Last Monday and Tuesday the patient was able to be up and transacted some business. Wednesday an abscess formed on the right ear and in twenty-four hours serious symptoms developed. The physicians regarded the case as critical, but hoped to arrest the disease. Blood poisoning set in and on Saturday other abscesses began to form in the left ear and throat. His condition was aggravated by a bad attack of rheumatism. This morning the physicians sent for a Chicago specialist, who arrived this afternoon. Dr. Watson's end was unexpected, and was hastened by a weak heart . . ."

The abscesses in the ears were evidently bilateral purulent otitis media, extending up from the tonsillitis and perforating the ear drums; for on Friday, May 3, Mrs. Watson wrote: "This loathsome catarrh is now slowly departing by way of the ears." The conditions referred to as "rheumatism" and "weak heart" were probably manifestations of virulent septicaemia. The outcome might well have been happier had antibiotics been available then.

A few years ago, while motoring in Iowa, my wife and I decided to visit Mount Pleasant, which is in the south-eastern part of the state. Circumstances led us there on a beautiful Sunday morning (June 22, 1952), an appropriate day for such a pilgrimage. A drive of nearly fifty miles east from Ottumwa brought us to Mount Pleasant, a

town similar in size to Valley City, arranged round a central square containing a shady park. Entering the square from the south-west, we immediately saw the sign of the Brazelton Hotel at the opposite corner. We asked the desk clerk if he knew of any plaque or memorial to a famous British clergyman who died in that hotel many years ago. He did not; but he kindly introduced an elderly gentleman, Mr. Wallbank of Mount Pleasant, who happened to be in the hotel lobby. To the same question the latter replied: "He was Dr. John Watson, but he wrote under the name of Ian Maclaren." Then followed a most interesting conversation, Mr. Wallbank relating his own recollections of the happenings in Mount Pleasant with clarity and courtesy that will remain a pleasant memory. He said that Watson died of mastoid disease, and assured us that there is no memorial to him in Mount Pleasant.

Emerging into the Sabbath sunshine, we surveyed again the peaceful square overlooked by the hotel, noticing especially the older buildings that must have been silent witnesses of unwonted doings nearly half a century ago—anxious comings and goings—then the final going. We saw the college where John Watson was to have lectured, and mused upon that evening in May when its bell tolled fifty-seven times, once for each year in the life of Ian Maclaren. Finally there was the little railway station where began his last long journey home to Liverpool.

Leaving Mount Pleasant, we set our faces toward Winnipeg, with much to think about. True, many another has died even further from home, and under much worse circumstances. It seems to have been Watson's peculiar personality that lent poignancy to his last days. This mystic Celt who was not ashamed of being in two minds, this fervent Christian minister who was once seriously suspected of heresy, this Scottish Highlander whose birthplace and home were in England, this ardent patriot whose friend could assert, "There never was a Briton more at home in America than Watson was," this man when stricken unto death in a far land asked for the half-forgotten lines of an old Scottish hymn, "My Ain Countrie." It was his doctor who brought them to him—A Doctor of the Old School.

#### Reference

Nicol, W. Robertson. "Ian Maclaren," Life of the Rev. John Watson, D.D. London, Hodder & Stoughton, 1908.

## Medico Legal

### Malevolent Prenatal Influences\*

Elinor F. E. Black, M.D.

The adjective "malevolent" is used in the title to give as much freedom as possible to the discussion of theories which defy proof. It is assumed that certain factors and agents cause malformations in a human embryo, but the assumption is based on circumstantial evidence. Biological experiments on other species provide adequate proof of the harmful effects of certain genetic, environmental, and dietary factors and, by transference, we assume that the human species may be similarly affected. Present knowledge and experimental methods preclude using pregnant women for the necessary exhaustive research and therefore we must rely on evidence that is no more capable of incontrovertible proof than is the fancy that a bad fairy was hovering about at the time of conception.

It is understandable that a couple who find to their sorrow that their new baby is not perfect in every respect will seek some cause outside themselves to account for the defect. For centuries noxious prenatal influences which are now known to be quite innocuous to the developing foetus have been blamed for abnormalities. It is still believed in certain strata of society that if the pregnant woman witnesses a conflagration her child is likely to be born with a birth mark. Similarly, frights during the prenatal period were incriminated if the baby were born with a clubfoot, hare-lip or some such deformity. An accident occurring to a pregnant woman would be a satisfying explanation for the lamenting parents to account for defects in their offspring, particularly if blame for the accident could be levelled with profit at a third party. From this psychology arises the desire to sue those supposedly responsible for the physical and mental anguish involved.

The perfect full-term baby newly delivered from its mother was a single fertilized cell some 280 days before. Considering the metamorphosis involved in nine months of development, it is gratifying that so many babies reach the outside world in a state of perfection. About 12% of conceptions are aborted before the foetus reaches the stage of viability, or before the 28th week of intrauterine life; approximately another 0.5% of live births show aberrations of physical form or organic development. Thus over 80% of fertilized ova escape malevolent influences and become normal babies<sup>o</sup>.

The fertilized ovum is the single female cell which having accepted the nuclear head of the

sperm immediately begins to divide into many more cells. Fertilization takes place in the tube leading from the ovary to the uterus and during the early cellular division and growth the ovum maintains steady progress towards the uterine cavity, arriving there in approximately four days. Once in the uterine cavity it burrows into the specially prepared endometrium and at once establishes a blood supply sufficient for its needs. By the end of the second week the ovum is well implanted and the mass of cells has assumed form and distribution of tissues to a sufficient degree for it to be termed an embryo. From the third to the fifth week the various organs are developing, a definite human shape is evolving and at 35 days the embryo reaches the status of foetus. At the end of the sixth week rudiments of all the organs and limbs are visible to the naked eye, with the exception of the sex organs. Gross differentiation of structures continues at a rapid pace and by the end of the twelfth week centers of ossification have appeared in most of the bones, fingers and toes have separated and are supplied with nails, and sex differentiation has begun. Therefore it is evident that the essential tissues of the various organs, systems and limbs are in place and developing according to their potentialities for normalcy less than three calendar months after conception.

The ovum, embryo and foetus are well protected during development. Fluid forms within the ovum in the very early stages of cell division. This and the cells of the potential embryo are enclosed by two layers of resistant membrane. Thus the embryo and foetus develop in amniotic fluid contained in the amniotic sac. This protected state persists normally until delivery is imminent. The amount of amniotic fluid varies and in certain pathological conditions may reach untoward amounts. Nevertheless there is no doubt the fluid has a cushioning effect which protects the developing baby from jars and jolts. The uterus itself is a muscular bag with a considerable degree of mobility in the early months of pregnancy which also serves to lessen the transmission of jolts to its occupant. During the early weeks of gestation the uterus is protected by the pelvic bones as well as by the firm abdominal wall made up of layers of fibrous tissue, muscle and fat. With all these protective devices it is obvious that the developing foetus is a preferred entity, and no chance is taken that untoward external influences can damage it. After the twelfth week the enlarging uterus becomes an abdominal organ, but the other protective measures remain.

How then do harmful influences reach the foetus? -In view of the early organization of tis-

\*Presented at the Manitoba Medico-Legal Society, February 28th, 1956.



sues it is apparent that specific damage must occur within the first five or six weeks of life and seldom after the twelfth week. This suggests that the majority of the malevolent agents must be inherent in the ovum or arise within the maternal organism. The origin of human defects is something about which Science can prove little, but many gross bodily deformities are undoubtedly hereditary. However, in recent years much has been written about the probable relationship of certain heart and eye defects to virus infections in the mother during the first twelve weeks following conception. Also bleeding in the embryo weeks may mean sufficient dislodgement of the sac to cause a lack of oxygen and nutriment, thus militating against the normal development of highly specialized structures, such as the cardiovascular and nervous system. Maldevelopment so caused may not be evident outwardly at birth, yet be quite incompatible with survival. Kenneth Bowes<sup>1</sup> sums up our knowledge as follows: "At the present time, investigation of the cause of foetal malformation only reveals our great ignorance. . . It is safest to assume that causes of foetal malformations are multiple, partly genetic and partly environmental, and apparently the same condition may have quite different origins in two families."

To examine the inherited factors one must start with the male and female seeds before their union. It appears that foetal abnormalities may arise in the genes, those infinitesimal beads that are strung along the threads of the chromosomes, or in the environment of the genes. Inherited undesirable or abnormal genes may be carried by either the female or the male seed, thus accounting for anomalies which appear through several generations of families. Or a gene may undergo spontaneous mutation initiating deformed offspring in a family<sup>6</sup>. Such defects present in one or other germ cell before union are inherited according to Mendelian principles. The appearance of inherited deformities will depend on whether the altered gene is dominant or recessive, and on other factors of genetic principles not too well understood in the human. It must be remembered that research into human embryonic aberrations cannot be pursued with ease as in lower biological forms, and therefore data are lacking in many spheres in which we should like to have precise knowledge. However, the inherited nature of many defects has been well demonstrated. Boyd and Hamilton<sup>2</sup> list 17 dominant inherited characteristics including syndactyly, polycystic kidneys, ptosis of eyelids, cataract and neurofibromatosis; 15 recessive inherited characteristics, including microcephaly, anencephaly, dislocation of the hip, spina bifida, club foot, imperforate anus and hermaphroditism; 9 dominant or recessive inherited characteristics including

polydactyly, cleft palate, hare lip and coloboma iridis. The list also includes many of the rare syndromes and diseases that are seldom encountered. Murphy<sup>9</sup> estimates that families already possessing a malformed child have a 24 times greater chance of producing subsequent defective offspring than have families not so afflicted.

Apart from genetic aberrations there may be structural defects in either the sperm or the ovum, thus if one component of the union is blighted, normal development will not occur. Another hazard is delay in the meeting of the two germ cells whereby one or the other may be past the phase where fertilization will yield elements propitious for normal development. It is possible that these two considerations are involved in 12% of pregnancies ending in abortion. On the other hand, a proportion of structurally defective or tardily united cells may attempt continued development and produce a far from normal being.

Faulty environment may lie directly within the maternal organism. Poor development or disease of the tissue within the uterus into which the fertilized ovum imbeds itself may cause insufficient nourishment for optimum growth of the embryo. Also advancing age of the mother, too many pregnancies, malnutrition and vitamin deficiencies are postulated as possible causes of an unhealthy environment during the early stage of foetal development.

Lately it has become accepted that virus infections in the mother are capable of passing through the foetal membranes to cause distortion of developing embryonic and foetal structures, especially the cardiovascular system and the eyes. The virus most frequently incriminated is that of German measles. This was brought to light by an epidemic of German measles in Australia in 1941 after which there appeared an inordinate number of congenitally defective newborn infants. Having thus been alerted, the medical profession paid more attention to the occurrence in pregnant women of this prevalent infectious fever which was previously thought to be the most innocuous. There is considerable divergence of opinion as to the actual detrimental effect which the German measles virus may have. Figures vary from 10% to 90%<sup>7</sup> and Collins<sup>3</sup> in Australia maintains that risk of foetal abnormality, if the disease is contracted during the first four months of pregnancy, is 70-80%. The earlier in pregnancy that the infection is acquired, the higher is the incidence of abnormalities and after the fifth month the risk is relatively insignificant. In reviewing the literature on this subject, the average incidence of congenital abnormalities associated with German measles is about 20%. This figure is sufficiently high to raise the question of the desirability of therapeutic abortion should German measles be definitely diagnosed during early pregnancy. Other



virus infections which may have the same deleterious effects on developing embryonic tissues are ordinary measles, mumps, and influenza. Fortunately measles and mumps are usually acquired in childhood bestowing an immunity for later life. This is not so with influenza which in its milder forms is often passed off as a heavy cold that may have been forgotten until a baby born with abnormalities starts the doctor and the parents back-tracking through the prenatal course to determine any possible cause of the tragedy.

There is a recognized relationship between maternal diabetes and possible gross foetal deformities. Other diseases which may leave their mark on the foetus in utero are smallpox, chickenpox, tuberculosis, toxoplasmosis and rheumatic fever infections<sup>12</sup>. The stigmata of congenital syphilis are rarely seen these days thanks to premarital blood tests and effective treatment of the disease.

Incompatibility of the Rh factor in the bloods of parents was no doubt responsible for some spastic and mentally defective children in years past before the discovery of the existence of this important incompatibility and the recognition of its foetal manifestations. Probably many cases of cerebral palsy were due to minor sensitization of an Rh negative mother by her Rh positive foetus rather than to accidents during delivery as was commonly supposed. However Eastman<sup>4</sup> states that no etiology can be demonstrated in approximately 30% of cases of cerebral palsy and about 60% are associated with unfavorable environmental conditions between conception and birth, the most common being a definite lack of oxygen.

Animal experimentation has shown the developing embryo to be affected by numerous drugs and chemical substances. In the human the drugs ingested with malintent during early pregnancy are usually those with reputedly abortifacient effects. However, ergot, quinine, lead, aloes, penny royal, tansy tea, etc. are ineffective in disturbing an implanted ovum unless taken in near lethal doses. Should bleeding occur following overdosage it is possible that the blood supply of the embryo has been interrupted temporarily sufficiently to cause a damaging lack of oxygen and nourishment. This occurrence is so rare, in my experience, that one is able to assure the patient that her unsuccessful attempt to procure an abortion will not cause her to have a deformed baby. The relationship of bleeding in the early weeks of pregnancy to congenital anomalies, either outward ones or organic ones, is not well established. Many women will have episodes of bleeding throughout the early weeks and produce perfect babies. Or again, the bleeding may have been caused by Nature's unsuccessful attempt to get rid of an already abnormal ovum.

Carbon monoxide poisoning in the mother during the first six weeks, if it were severe enough to cause a state of anoxia, could influence the development of the foetal systems. This is true also of anaesthetic agents if they are administered to pregnant women with too low a concentration of oxygen in the mixture of gases.

Trauma or external violence needs little consideration as a cause of foetal anomalies. As has been stated the foetus is well sequestered within the abdomen, within the uterus, within its membranes and fluid. Trauma sufficient to influence the foetus would first cause such disruption of its environment that abortion, intrauterine death or the onset of premature labour would ensue. Eckerling and Teaff<sup>5</sup> report five cases of pregnant women near term who suffered abdominal injuries from blast and shell fragments. Caesarean sections done at the time of the repair of intra-abdominal lacerations resulted in the salvage of all babies. Lyons<sup>8</sup> reports a case where a fall down stairs at the sixth month of pregnancy caused rupture of the spleen necessitating its removal. The pregnancy continued to term with the delivery of a normal infant. Catastrophic automobile accidents may cause fracture of the pelvis or crushing of the abdomen with rupture of the uterus or disruption of the pregnancy leading to injury and death of the foetus<sup>10</sup>, but do not cause foetal deformities. However, Souter<sup>11</sup> reports the case of a seven months pregnant woman who accidentally shot herself in the abdomen. Operation was performed and it was found that the uterus had been perforated in two places but the other viscera were intact. The uterine wounds were sutured and the abdomen closed. Five days later the woman gave birth to a normal living child with two gunshot wounds in its thigh. Had the shotgun been in the hands of someone other than the mother our legal colleagues might have had a case.

Very rarely an internal genital organ containing a pregnancy may rupture into the abdomen in the early weeks with the growth of the foetus continuing among the intestines. Such an unusual environment can cause gross foetal abnormalities partly due to pressure of constricting adhesions. Should such an environmentally handicapped baby survive and be normal, it becomes a medical curiosity. Partitions or folds within the uterine cavity can cause anomalies of limbs and supposed partial amputation of limbs. These cases are very rare. More common are minor pressure effects such as peculiar attitudes of limbs or asymmetry of the skull due to the baby adopting a singularly cramped position within the uterus. These are not true congenital defects and the baby outgrows them.

Psychic trauma is another unwholesome influence whose effect cannot be assessed. Some women will abort, miscarry or go into labour following

minor shocks and tensions, while others subjected to rigorous strains or severe shocks will produce normal babies. Birth marks have no relationship to psychic trauma. They are due to dilated superficial blood vessels in the skin which for some unknown reason spread out widely and rapidly. Usually these vascular areas are too small to be noticed at birth but their rapid growth soon makes them obvious. They are frequently seen as a purplish patch in the hair line at the nape of the neck. Their origin is probably genetic.

Exposure of the pregnant woman to radium or high voltage x-rays early in pregnancy has deleterious effects on the foetus usually causing either abortion or resorption. Such exposure is occasionally necessary for therapy of malignant disease of the pelvis, the pregnancy being ignored in the interests of saving the mother. Should the pregnancy continue, deformity of the infant may be expected. If the foetus has reached the stage of viability before the need for irradiation treatment has been discovered, removal of the baby is done before commencing therapy. The amount

of irradiation exposure used in taking ordinary diagnostic films has no effect on the embryo or foetus.

In summary, it is evident that malevolent prenatal influences are actually few in number as over 80% of fertilized ova develop into normal babies. Genetic factors, poor intrinsic environment, oxygen deprivation and certain virus infections appear to be the major causes of congenital abnormalities in the light of our present knowledge.

#### References:

1. Bowes, Kenneth: *Modern Trends in Obstetrics and Gynaecology*, Butterworth, 1950.
2. Boyd, J. D. & Hamilton, W. J.: *ibid.*
3. Collins, I. S.: *M. J. Australia*, 2: 456, 1953.
4. Eastman, N. J. & deLeon, M.: *Am. J. Obstet. & Gynec.* 69: 950, 1955.
5. Eckerling, T. & Teaff, R.: *J. Obstet. Gynec. Brit. Emp.*, 57: 474, 1950.
6. Haldane, J. B. S.: *J. Genet.* 31: 413, 1935.
7. Krugman, S. & Ward, J.: *Paediatr.* 44: 489, 1954.
8. Lyons, A. S. et al: *Obst. & Gyn.* 5: 687, 1955.
9. Murphy, D. P.: *Congenital Malformations*, Lippincott, 1947.
10. Seear, T. & Woepel, C. J.: *Am. J. Obst. & Gynec.* 65: 451, 1953.
11. Souter, R. J. deN.: *M. J. Australia*, 2: 111, 1947.
12. Stern, D. M. & Burdett, C. W. F.: *Modern Practice of Obstetrics*, Bailliere, Tindall & Cox, 1952.

## Abstracts from the Literature

**A Further Case of Afferent Loop Obstruction Simulating Acute Pancreatitis.** Alan Thal, John F. Perry. *Annals of Surgery*, 143: 266, (Feb.) 1956.

Apart from emphasizing the dangers of a closed loop obstruction following an antecolic Billroth II gastrectomy using an excessively long loop of jejunum, the authors report a case history of a post-gastrectomy afferent loop obstruction which was incorrectly diagnosed acute pancreatitis because of an elevated serum amylase.

The patient was 69 years of age. Four months after a gastrectomy he began to have crampy periumbilical and epigastric pain together with nausea and vomiting of food and yellow fluid. Because his serum amylase was 2050 units a few hours after admission, an operation was refused though there were strong indications of an acute surgical abdomen. He died on the seventh hospital day and an autopsy showed a volvulus of the long afferent loop with formation of a closed loop obstruction which resulted in a gangrenous bowel.

The resistance to the outflow of pancreatic juices into the obstructed loop probably was the cause of the elevated serum amylase. Spasm of the sphincter of Oddi produced by morphine, ampullary calculus and other factors causing obstruction of the pancreatic ducts have been known to elevate the serum amylase. These must be differentiated from acute pancreatitis. In acute abdominal diseases where the clinical findings are

such as to indicate laparotomy, the report of an elevated serum amylase should not influence the decision to explore the abdomen.

J. M. Kagan,

**Recent Clinical Experiences with Serum Aminophosphatase (Transaminase) Determination.** Merrill, J. M. et al., *J.A.M.A.*, 160, 1454, 1956.

This report results of serum transaminase measurements in different conditions.

In myocardial infarction, the rise was 3 to 12 times normal. Patients with angina, calcific aortic stenosis, chronic rheumatic valvulitis, pulmonary edema, auricular flutter, healed myocardial infarction, idiopathic benign pericarditis and arteriosclerotic heart disease had normal values. One patient with acute rheumatic pericarditis had an elevated value. Two patients with necrosis of skeletal muscle had high values. After thoracotomy alone, an elevation was noted. With hepatic cell injury the values are elevated. The values appear to be related to the amount of cellular necrosis. Obstructive jaundice wasn't associated with elevated values.

Elevated values for serum transaminase are found with necrosis of myocardial tissue, skeletal muscle, and liver. High concentrations of the enzyme are found in these tissues. The test must be evaluated along with the entire clinical picture, as the test is not specific.

A. G. Rogers.

## Editorial

S. Vaisrub, M.D., M.R.C.P. (Lond.), F.R.C.P. (C.), F.A.C.P., Editor

### Medical Technique

*Technique! The very word is like a shriek of outraged heart.*

Leonard Bacon, Ph.D.'s Sophia Trenton.

Technique is defined in the pocket edition of Webster's New Collegiate Dictionary as "a method of procedure and details of any mechanical process or surgical operation." It would appear, in the light of this definition, that the surgical connotations of "technique" are not likely to endear it to the heart of the internist. Indeed, it would seem that the meek and gentle soul, who in his flight from technique took refuge in Internal Medicine, would fain wish to be reminded of it. Mechanical procedures are for the surgeon and his kin. For the physician there is the world of "pure reason."

The above naive conception of the ivory tower in which the internist dwells has been exposed as a delusion by Dr. Gerard Allison in his paper "Errors in Medical Technique" (published in this issue of the M.M.R.). Far from being aloof from the humdrum world of technical procedures, the physician is shown to be a very active participant. True, he may shun the scalpel and the ligature, but how fond of the syringe and the needle! He has foresworn the scissors and the cautery to embrace the electrocardiogram and the ophthalmoscope. Indeed, the physician is up to his neck in technique.

Technique breeds errors. Every procedure is fraught with pitfalls. The wise physician is forever on the lookout for possible sources of error. He pays heed to the minutest details, lest a slip vitiate the results; he checks and double checks the recorded figures, remembering that a misplaced decimal may bring disaster; above all, he exercises caution in his interpretation of recorded results, avoiding hasty and unwarranted conclusions. It goes without saying that the wise physician is always sure of his choice of the right technique for the attainment of the desired goal. A guest eating peas off his knife, no matter how deftly, can hardly be commended for his technique of social amenities.

Illustrative as the list of errors cited in Dr. Allison's article may be, it is by no means exhaustive. Every reader will, no doubt, be able to supplement it with some of his own, should he care to bring to light errors tucked away in some dark alcove of past remembrance. These errors range from the embarrassingly trivial of forgetting to place the earpieces of the stethoscope in one's ear, while moving the chestpiece over the strategic areas of the patient's chest, to the

tragically serious of inducing iatrogenic disease. How often have we diagnosed hypertension unwarrantedly on the strength of one random blood pressure reading, or hyperthyroidism on the basis of one basal metabolism report, or diabetes on the flimsy evidence of one borderline glucose tolerance curve?

Rather than indulge in these reminiscences, however, let us pause for a moment to re-examine our concept of technique. Here again let us enlist the help of a dictionary. Let us reach for the Merriam-Webster Pocket Dictionary and see what it has to say on the subject. "Technique," it states, "is a method of procedure that produces skill in any art, science, profession." Thus defined, technique extends beyond the realm of mechanics into the broader fields of all human endeavor. It becomes more than a mere knack for handling tools. It is conceived as a manner of performance, a skill, be it that of a dancer, a pianist, or an analytical philosopher. Viewed in this light, medical technique reaches beyond the skilful handling of medical instruments. It even transcends the simpler arts of inspection, palpation, and percussion to include the most difficult skill of all—that of talking with patients, the skill in the use of the instrument of language.

Talking with patients is the subject matter as well as the title of a recently published book by Dr. Brian Bird (reviewed in this issue of the M.M.R.). The following passage from the book is well worth quoting: "It is remarkable and regrettable to what extent this aspect of medical skill is taken for granted. In Medical School a student spends hours learning to dissect, to percuss, etc.—all essential things, but he is presumed to know how to talk. This is not necessarily so."

Dr. Bird makes it amply clear that the technique of talking with patients, being neither easy nor simple, is fertile soil for the seeds of error. The latter involve the process of eliciting information from patients as well as that of imparting it to them.

High on the list of faulty technique is that of a formalized, stereotyped, categorized third degree type of interrogation to which many patients are subjected. The sound of the insistent questioning voice prying into his past and the present, and the sight of the hand feverishly writing down intimate details of his life are anything but relaxing and reassuring to the patient. They evoke memories of past interviews with prospective employers and insurance assessors. They may even stir up images of oriental torture chambers. Not much more conducive to good rapport between

doctor and patient is the hurried interview, interrupted by frequent telephone calls and knocks on the door, with the physician casting furtive glances at his time piece. Even more harmful than extraneous interruptions are those caused by some irrelevant remark or leading question on the part of the doctor. Just when the patient is warming up to tell him his story in his own way. Good listening is a *sine qua non*, if a good history is to be obtained.

The technique of talking with patients, however, does not end with the anamnesis. There are the never to be forgotten, all important matters of advice, explanation and guidance. Here the utmost care must be exercised not to confuse the patient with contradictory statements, nor

frighten him by brutal bluntness. Words can be "physicians of a mind diseased." They can also be "razors to a wounded heart." Indeed, the physician, who knows the power of the spoken word and uses it to heal hearts rather than break them, is an expert in the most important branch of medical technique. Were he to be asked to define the latter term, he would, probably, refer us to yet another dictionary — "the Webster's New International" — for the following definition: "Technique is the expert method of accomplishing something, especially in the creative arts." The physician, who plays the instrument of language as a master violinist does the violin to soothe and bring solace, raises Medicine to the level of creative art.

Ed.

## Obituary

### Dr. Maxwell Bowman

Dr. Maxwell Bowman, 60, provincial director of preventive medical services, died on April 26, at his desk in the Legislative Building. Born in Miami, Manitoba, he graduated with the degree of M.D. from the Medical Faculty of the University of Manitoba in 1920. He practised in Sperling until 1928 when he became a municipal doctor at Clanwilliam. In 1935 he went to the University of Toronto and obtained a diploma in public health.

In 1939 he joined the staff of the provincial government as epidemiologist, and three years later became professor of social and preventive medicine in the University of Manitoba, retiring in 1952. He was one of the founders of the Canadian College of Preventive Health.

During the polio epidemic of 1953 Dr. Bowman worked tirelessly and showed his medical and executive ability. When the Salk vaccine became available he arranged for its orderly distribution to the children of the province.

He is survived by his wife, four sons, of whom John and William are able pediatricians, a daughter and ten grandchildren.

An editorial in the Winnipeg Free Press mentioned his devoted service in preventive medicine and the pure joy he must have felt when the success of the vaccine has apparently made impossible the repetition of another epidemic of poliomyelitis.

### Dr. Sigurd Julius Johanneson

Dr. Sigurd Julius Johanneson died in Winnipeg on May 12, aged 88. Born in Iceland, he graduated from the National Medical University, Chicago in 1907 and registered with the College of Physicians and Surgeons of Manitoba in 1922. After practising for several years in Icelandic communities in Western Canada, he moved to Winnipeg and practised there until his retirement. However, he was better known as an eminent Icelandic language poet and journalist. He published three volumes of poems, many of which were written for children.

### Dr. Frederick C. A. Walton

Dr. Frederick C. A. Walton died in New Westminster, B.C., on May 18, just three days short of his eightieth birthday. Born in Barbados, B.W.I., he graduated from Manitoba Medical College in 1905 and practised at Mather, Manitoba until 1911 when he went to Winnipeg. When the First World War broke out he became a captain in the Canadian Army Medical Corps and served in England until the close of the war. He continued to practise in Winnipeg until 1950 when he retired to New Westminster. He was Pensions Examiner with the D. V. A. and was surgeon to the St. Andrews and St. John's Ambulance Societies.

He is survived by his widow, three sons, Dr. C. H. A. Walton, Winnipeg, Dr. F. A. in New Westminster, George in Montreal, and a daughter, Mrs. Dusang, of Kenora, Ont.



## Association Page

Reported by M. T. Macfarland, M.D.

### 1956 Legislation of Interest to The Medical Profession

Bill 12—The Civil Defence Act—validation of Order-in-Council and agreement with Government of Canada re compensation in respect of injuries suffered by, or the death of, civil defence workers.

Bill 14—An Act to Provide for the Control, Purchase and Sale of Liquor—the so-called "reform" Bill to provide new outlets.

Bill 17—An Act to Amend the Cancer Act—The President of the College of Physicians and Surgeons of Manitoba is removed as an ex officio member, and the College is entitled to elect one member to the Board.

Bill 18—An Act to Amend the Marriage Act—a certificate (of pregnancy) may be given only by a duly qualified medical practitioner; and in the case where either of the parties is, or both of the parties are under the age of sixteen years, the consent of the parent or guardian must be obtained.

Bill 24—An Act to assist in the Provision of Housing Accommodation for Elderly Persons.

Bill 26—An Act to Amend the Child Welfare Act—Where a child has been found to be a neglected child or a juvenile delinquent, provision is made for the adoption of the child without consent of the natural parents.

Bill 43—An Act to Authorize the Guaranteeing of Certain Indebtedness of The Winnipeg General Hospital.

Bill 49—An Act to Amend the Health Services Act—Section 32A as enacted in 1955 applied only to contracts or arrangements by a Municipal Corporation with Manitoba Medical Service. The amendment allows arrangements to be made with Manitoba Hospital Service Association or with a duly licensed insurer.

Bill 58—An Act for granting to Her Majesty Certain Sums of Money for the Public Service of the Province for the fiscal year ending the 31st day of March, 1957.

#### VIII—Health and Public Welfare.

1. Executive Division .....	\$ 344,040.00
2. Health .....	7,391,041.00
3. Welfare .....	4,919,365.00
4. Building and Other Projects	
Chargeable to Capital	
Division .....	7,500.00
5. Construction Grants .....	997,115.00
	<hr/>
	\$13,659,061.00

Bill 64—An Act to Amend the Hospital Aid Act—"The chief purpose of this bill is to substitute for the provisions respecting grants to hospitals new provisions whereby municipalities (and the government in the case of patients from unorganized territory) will assume and pay the hospital bills of indigent standard ward patients; and the government will reimburse municipalities for 40% of the cost incurred annually for that purpose.

In addition the present grants to hospitals providing teaching facilities for medical students will be continued. Provision is made for a new grant to be known as the "availability grant" in the case of hospitals with 60 bed capacity or less.

Before a hospital is entitled to receive payments or grants under the Act it must be named for the purpose in an order of the Lieutenant-Governor-in-Council.

Provision is now made in the statute for The Hospital Rate Board which is to have the duty of making inquiry and recommending annually to the Lieutenant-Governor-in-Council the rates at which payment of hospital bills should be made to the several hospitals.

The expression "standard ward" is substituted for the expression "public ward."

Bill 69—An Act respecting the Law Society of Manitoba—provision to enter into a contract for life, accident, sickness insurance or medical and hospital benefits, and to collect premiums from members for same.

Bill 70—An Act to consolidate and revise The Winnipeg Charter—Sections 701-704, inclusive, outline general power health and sanitation to make regulations, including certain health services.

Bill 71—An Act to amend The Greater Winnipeg Water District Act—authorizes fluoridation of water supplies for five years if not less than 85% of the total combined population of at least 5 municipalities agree.

Bill 72—An Act to amend the Highway Traffic Act.

Bill 77—An Act for granting to Her Majesty Certain Further Sums of Money for the Public Service of the Province for the Fiscal Year ending the 31st day of March, 1956. VIII—Health and Public Welfare, \$799,750.00.

Bill 86—An Act to amend The Government Liquor Control Act—general permit abolished.

Bill 87—An Act to amend The Gasoline Tax Act—the tax on gasoline raised from nine to eleven cents per gallon.

Bill 95 — An Act respecting Collecting or canvassing for Contributions for Charitable or Other Purposes.

Bill 99 — An Act to provide for the Incorporation of the Alcoholism Foundation of Manitoba—Manitoba Medical Association is asked to nominate three persons of whom one will be appointed by the Lieutenant-Governor-in-Council to a board of twenty-seven members. The Minister of Health and Public Welfare shall appoint a medical advisory committee of five duly qualified medical practitioners.

Bill 104 — An Act to amend the Social Assistance Act — The Government of Manitoba may enter into agreement with the Government of Canada whereby the former may claim reimbursement from the latter, in whole or in part (a) of the cost of social assistance provided in that year by the municipalities in the province; and (b) of the cost incurred by the Government of Manitoba in providing to persons in unorganized territory assistance or relief similar to the social assistance provided by a municipality.

Bill 108 — An Act to amend the Workmen's Compensation Act—Subsection (7) of Section 79 deals with compensation payable to workmen disabled by reason of silicosis and the amendment provides for compensation to be paid as in the case of other industrial diseases.

### Northwestern District Medical Society

A meeting of the Northwestern District Medical Society was held at the Hamiota General Hospital on Wednesday, May 16th.

Present were Doctors W. A. Large, Roblin, President; W. K. Hames, Kenton; R. O. Hinch, Minnedosa; J. E. Hudson, Hamiota; J. D. McMillan, Oak River; J. A. Dupont, Virden; J. P. Gemmell, Winnipeg; M. T. Macfarland, Winnipeg; J. McKenty, Winnipeg; P. H. McNulty, Winnipeg.

The clinical program consisted of a very interesting case of jaundice in a sixteen-year-old girl, presented by Dr. J. E. Hudson and discussed by Dr. J. P. Gemmell.

Dr. P. H. McNulty gave a very lucid outline of the work of the Manitoba Medical Service, and Dr. J. McKenty enlisted support for the formation of a Hamiota Unit of the Manitoba Chapter of the College of General Practice.

Dr. Macfarland circulated a copy of letter dated May 15th requesting opinions on health insurance.

A delicious dinner was served in the Municipal Offices Building when Dr. W. A. Large, President of the Society was Master of Ceremonies.

Dr. J. E. Hudson, Vice-President of the Manitoba Medical Association gave an outline of the

course in Pediatrics which he attended at the Cook County Hospital on a Fellowship arranged by the Manitoba Chapter of the College of General Practice through the Manitoba Institute for the Advancement of Medical Study and Research.

### Northern District Medical Society

The semi-annual meeting of the Northern District Medical Society was held at the Dauphin General Hospital on May 17th.

Present were Drs. M. K. Brandt, Dauphin; R. E. Dicks, Dauphin; C. R. Green, Ethelbert; J. E. Hudson, Hamiota; H. Little, Dauphin; M. Potoski, Dauphin; W. G. Ritchie, Dauphin; B. Symchych, Dauphin; M. Tanasichuk, Grandview; M. T. Macfarland, Winnipeg; J. H. McBeath, Winnipeg; T. M. Roulston, Winnipeg.

Following coffee a clinical session with presentation of cases and discussion by the visiting speakers was held in the Nurses' Sitting Room.

Lunch was served in the Nurses' Dining Room through the courtesy of the Administrator, Mr. A. Schmeidl, the Matron, and members of staff, following which Dr. J. E. Hudson, Vice-President of the Manitoba Medical Association, gave an outline of the course in Pediatrics which he attended at the Cook County Hospital on a Fellowship arranged by the Manitoba Chapter of the College of General Practice through the Manitoba Institute for the Advancement of Medical Study and Research.

The afternoon session was held in the auditorium of the Health Unit when Dr. J. H. McBeath, Winnipeg, spoke on the subject of "Upper Urinary Tract Lesions" and Dr. T. M. Roulston on the subject of "Delayed Labor."

Buffet luncheon was served at the home of Dr. M. Potoski.

### Victorian Order of Nurses

We have just returned from the annual meeting of the Victorian Order of Nurses for Canada, held in Hamilton, Ontario. The 550 nurses of the Order made nearly one million visits to the sick within the 116 V.O.N. branches during the year 1955.

Winnipeg branch employs 18 staff nurses and they made over 40,000 visits in the Greater Winnipeg area last year. 16% of these were fully paid for (\$2.00 per visit), while we received part-pay for 44%, and 40% were free visits.

The services of the V.O.N. are available to the public. The Nurses work under the direction of the physician whose orders are carefully adhered to.

Call Victorian Order of Nurses, 92-8529.

## Social News

Reported by K. Borthwick-Leslie, M.D.

Many honors, fellowships, bursaries etc. have been bestowed on our Members recently, not to mention our new graduates. Due to lack of space, may I congratulate all en masse and itemize such? The congratulations most sincere.

To C. B. Schoemperlen (Benny to me), an invitation from the President of the American College of Chest Physicians, to accept an appointment to the Committee of Broncheosophagology. One other Canadian from Montreal, invited to join the ten member committee of ye famous names, such as Chevalier Jackson, Paul Hollinger, Olsen of Mayo's, etc. Nice going, Ben.

To Brig. J. N. B. Crawford of Hong Kong fame, physician to Queen Elizabeth while she was touring Canada, and chief director-general of treatment for D.V.A. in Ottawa, who has been appointed Chief Hospitalier of the Order of St. John in Canada.

Col. T. E. Holland has been named honorary surgeon to the Queen, director of medical services for the militia in this area. This rare tribute is the first to be conferred since before the last Great War, and was granted on the recommendation of the minister of national defense.

Dr. J. Nixon Briggs was recently elected to Academy Fellowship by the American Academy of Pediatrics at Evanston, Ill.

Receiving awards for service at the Shriner Hospital over the week-end were:

Silver Emblem, Dr. Sam Boyd; Gold Emblem, 1 Star, Drs. Ken McKibbin, chief surgeon, and Alf Deacon, asst. surgeon. Guess Dr. Gardiner must have sneaked in on the gold emblem with diamonds an' stars n' things some time when I wasn't looking, 'cause he sure was a-working for them in the good old days . . .

Dr. Ross McKay Creighton, acting director has been appointed director of preventive medicine for the Manitoba Government succeeding Dr. Maxwell Bowman, whose sudden death occurred in April. He was a hard man to succeed, Dr. Creighton. A mighty challenge for anyone to fill his shoes.

Drs. Bruce Chown and Colin C. Campbell have been chosen by the Red Cross as members of the newly formed national scientific advisory committee for the blood transfusion service.

David Alistair Blair, U. of M. and Edinburgh U. graduate will do research in surgery at the U. of M. John Allan Moorhouse, U. of M. will do research in endocrinology at the University of Michigan. Both of these fellowships were awarded by the National Research Council of Canada.

Dr. A. Morton (Buzz) Brown, graduating 1956, was awarded a \$4,100 clinical fellowship from Columbia U. and Presbyterian Hospital in New York. Dr. Brown will be post graduating in Pathology.

Dr. John J. Zadworny, recent graduate is now doing P.G. work in Obstetrics and Gynaecology in Chicago.

Dr. Dorothy Hollenberg was elected President of the Federation of Medical Women (Man.) at the annual banquet in honor of the lady graduates. Darned good party and dinner at Southwood, honoring Patricia Pickard (daughter of Dr. and Mrs. H. T. Pickard, Oxbow, Sask, granddaughter of the late Dr. H. G. Pickard, Oxbow, and niece of our Dr. Ed Pickard . . . whew . . . what a reputation for the gal to live up to! Joyce Graham, Beverley Hodgson, Joan Hollenberg, Veronica Kregar and Eva Rado.

Assisting Dr. Dorothy are Ruth Mathers, Vice President; Marie Storrie, Secretary, and Donna Randall, Treasurer. (She hasn't much work to do—usually no funds).

The Manitoba Clinic announces the establishment of its Department of Cardiology.

Drs. R. E. Beamish (Boss yet), E. N. East, V. Marie Storrie, L. L. Whytehead (cardiac surgery) and H. D. Kitchen, consulting internist.

They sound like formidable brains and ability. Does that mean I can no longer pick Bob's brain about anything but heart beats?

### Displaced Persons Dept.

J. A. Rubin, M.D., M.Sc. (Oto), D.A.B. (Oto). Ear, Nose and Throat only—is now located at 603 Boyd Bldg., phone 93-4668.

Leslie J. Cera, M.D., M.Sc., F.R.C.P. (C) announces his association with the Kobrinsky Clinic, Internal Medicine and Cardiology.

Charles Hollenberg, M.B.E., M.D., M.Ch. Orth. (L Post), F.R.C.S. (Eng. and C), F.I.C.S. is now associated with D. M. Bruser, M.B.E., B.A., M.D. Ch.M., F.R.C.S. (C) in Orthopedics and Traumatic Surgery. Both are members of the Mall Medical Group.

Happy landings, Charles.

Dr. M. H. L. Desmarais, L.R.C.P., M.R.C.S. (Eng.), D. Phys. Med. (Lond.), specializing in Physical Medicine and Rheumatology is now located at 201 Medical Arts, 93-1153. Welcome to the building, Doctor.

### Romance Dept.

Dr. Noel Cutler, '53, doing post graduate surgical work in Cincinnati, on August 28th will marry Barbara Nancy Fullman, of Cincinnati.

In October, in Montreal, Dr. Charles Hollenberg, son of Dr. and Mrs. A. Hollenberg, will marry Michell Gelfand of Montreal.

In Vancouver, June 9th, Shirley E. R. McNair, formerly of Shoal Lake, Man., and Dr. James Alan McCann, son of Dr. A. S. McCann, were married in Fairview Baptist Church.

Romance in Retrospect, and has that stork been active . . .

Dr. and Mrs. Walter Zingg, Centennial St., announce the birth of their third daughter, Esther Anne, May 23, 1956.

Dr. and Mrs. J. E. Burch are happy to announce the arrival of Peter Geoffrey, June 2, 1956.

(Continued on page 403)

**Oral**  
for the **ORAL** treatment  
of pernicious anemia

**Willcotrin**



Capsule Vitamin B<sub>12</sub>  
with Intrinsic Factor

Each capsule contains Vitamin B<sub>12</sub> with Intrinsic Factor Concentrate C.S.D. in Oral Unit.

**Indications**—Willcotrin is indicated in the treatment of pernicious and related macrocytic anemias with or without cord involvement. It is effective by virtue of its vitamin B<sub>12</sub> content in the treatment of tropical and nontropical sprue, nutritional macrocytic anemia caused by vitamin B<sub>12</sub> deficiency and macrocytic anemia of pregnancy and of infancy.

Available in bottles of 25 and 500

CHARLES E. WILL & CO. LIMITED • London, Canada  
MEDICAL PHARMACEUTICALS

**Professional Representative: Mr. A. C. Payne, 49 Harmon Ave., St. James, Man.**



### Social News (Continued)

Dr. and Mrs. Geo. Sisler, also a son, Wm. John, May 15, 1956.

Dr. and Mrs. Henry Kaye, Melita, Man., their third son, Gerald Andrew, born May 3, 1956 in Deloraine Memorial Hospital.

Dr. and Mrs. F. A. Champaigne of St. Claude welcome Mona Lynne, sister for Denise, born May 15, 1956 in Notre Dame Hospital.

Dr. and Mrs. H. A. Lander welcome a sister for Samuel Mark, her name Terry Lynn and she appeared May 11, 1956.

Dr. and Mrs. A. A. Campbell (Sandy) announce the arrival of Craig Joseph, May 11, 1956.

Dr. and Mrs. Donald Proctor, Niagara St., welcomed a son, Arthur Douglas, May 27, 1956.

Dr. and Mrs. Charles Malkin are happy to announce the birth of Laurel Jacqueline, sister for Murray, arriving May 7, 1956.

#### Attention Gastroenterologists—

Quote from a letter from a patient: "I am visiting in Whiteshell and my hostess tells me a friend of hers in England had part of her stomach removed, and the doctors blamed Tampax. I am wondering if I should use it anymore as I would not like to have my stomach taken out."—Unquote.

### General Practitioners

#### Poliomyelitis Survey

A survey of poliomyelitis cases of the 1952-1953 epidemics is now being carried out by the Department of Surgery of the University of Manitoba under the direction of Doctor Charles Hollenberg. It is likely that this will produce valuable information, as a survey of such magnitude is not known to have been carried out before with poliomyelitis.

From preliminary work done on available records, it is obvious that it will be necessary to obtain a good deal of information through the patient's doctor.

The Department of Surgery is employing a medical student (Mr. Lloyd Frihagen) to help in this work. He will be contacting some of the physicians who are concerned with this survey.

The purpose of this notice is to bring this survey to the attention of the profession and to ask for the co-operation of all concerned with regard to questionnaires and also to facilitate the work of the medical student in his inquiries.



## Complete Carbohydrates

### For Infant Feeding

#### CROWN BRAND, KARO and LILY WHITE Corn Syrups

- Readily Digestible . . . Well Tolerated
- Completely Absorbed and Utilized
- Balanced Mixture of Dextrins, Dextrose and Maltose



.....

• The Canada Starch Company Limited  
Box 129, Montreal.

• Please send me FREE, Physicians Handy Pocket Size  
Formula Guide and Prescription Pad ☐  
Children's Grow Charts ☐ Crown Brand Samples ☐

• NAME.....

• ADDRESS.....

.....

*"Yessir, since I retired I've been fishing every day!"*



Each year, as more and more people attain a ripe old age, more and more physicians prescribe GEVIRAL to help keep these senior citizens fit and active. This special geriatric diet supplement provides 14 vitamins, 11 minerals, and Stomach Concentrate in one convenient, dry-filled capsule.

## Geviral\*

GERIATRIC VITAMIN-MINERAL SUPPLEMENT LEDERLE

Each GEVIRAL capsule contains:

Vitamin A.....	5000 Int. Units	Calcium d-Pantothenate.....	5 mg.	Calcium (as $\text{CaHPO}_4$ ).....	145 mg.
Vitamin D.....	500 Int. Units	Choline Dihydrogen Citrate.....	100 mg.	Phosphorus (as $\text{CaHPO}_4$ ).....	110 mg.
Vitamin B <sub>1</sub> .....	3 mcgm.	Inositol.....	50 mg.	Boron (as $\text{Na}_2\text{B}_4\text{O}_7 \cdot 10\text{H}_2\text{O}$ ).....	0.1 mg.
Thiamine Mononitrate (B <sub>1</sub> ).....	5 mg.	Ascorbic Acid (C).....	50 mg.	Copper (as $\text{CuO}$ ).....	1 mg.
Riboflavin (B <sub>2</sub> ).....	5 mg.	Vitamin E (as tocopherylacetates) 10 Int. Units		Fluorine (as $\text{CaF}_2$ ).....	0.1 mg.
Niacinamide.....	15 mg.	Rutin.....	25 mg.	Manganese (as $\text{MnO}_2$ ).....	1 mg.
Folic Acid.....	1 mg.	Stomach Concentrate.....	0.5 mg.	Magnesium (as $\text{MgO}$ ).....	1 mg.
Pyridoxine HCl (B <sub>6</sub> ).....	0.5 mg.	Iron (as $\text{FeSO}_4$ ).....	10 mg.	Potassium (as $\text{K}_2\text{SO}_4$ ).....	5 mg.
		Iodine (as KI).....	0.5 mg.	Zinc (as $\text{ZnO}$ ).....	0.5 mg.

Other Lederle geriatric products include: GEVRABON\* Vitamin-Mineral Supplement Liquid with a wine flavor; GEVIRAL\* Protein Vitamin-Mineral-Protein Supplement Powder; and GEVRINE\* Vitamin-Mineral-Hormone Capsule.



LEDERLE LABORATORIES DIVISION, NORTH AMERICAN Cyanamid LIMITED, MONTREAL, QUEBEC

\*REG. TRADE-MARK

## Winnipeg Medical Society Committee Reports 1955 - 1956

### Report of the Secretary

To the President and Members of  
The Winnipeg Medical Society:

The Winnipeg Medical Society this year has been quite active. Six regular meetings and three special meetings, as well as the annual Hospital Evening, were held. All of these were very well attended and the subjects stimulated considerable interest. In January, the Society combined its regular meeting with a special University Association meeting when the new auditorium was opened. The Society was honored in having Dr. Sheila Sherlock of London, England, address a special meeting in November and Dr. John Anderson of Minnesota another in March. This year the hospital meeting was held at Deer Lodge.

On completion of the addition to the Medical College, this Society equipped and furnished a doctors' reading room in the library.

During the past year the Society mourns the loss of eight of its members:—J. H. Conklin, Henry Funk, Alexander Gibson, C. M. McIntyre, H. J. Scott, C. M. Strong, Thomas Turnbull, and Digby Wheeler.

In the later months of the term, a committee under the chairmanship of Dr. David Swartz has carefully prepared a revision of the constitution which was voted upon and accepted in the April meeting.

The routine business of the Society was carried on in the meetings of the Executive Council under the efficient chairmanship of Dr. A. R. Birt.

Respectfully submitted.

A. W. McCulloch,  
Chairman.

### Treasurer

May 2, 1956.

To the Members,

The Winnipeg Medical Society,  
Winnipeg, Manitoba.

We have examined the balance sheet of The Winnipeg Medical Society and The Winnipeg Medical Society Library Fund as at April 30, 1956, and the statement of revenue and expenditure for the year ended on that date and have obtained all the information and explanations we have required. Our comments on these statements, which are attached, are as follows:

### Operations

The operations for the year, as set forth in the attached statement of revenue and expenditure, have resulted in a net expenditure for the year in the General Fund of \$2,482.83 and a net revenue in the Library Fund of \$733.97. Membership fees are in accordance with amounts shown by duplicate receipt forms examined by us. Adequate vouchers have been examined in substantiation of all expenditures.

In accordance with the minutes of the Council meeting of December 12, 1955 the sum of \$1,000.00 was disbursed from the General Fund and placed in the Library Fund. A statement of the transactions recorded through this account during the year is attached.

During the year the Society expended \$2,607.72 for furnishing the reading room of the new Medical College. This was approved at the general meeting of the Society held December 16, 1955.

### Balance Sheet

The bank balances were confirmed by certificate received from the Toronto-Dominion Bank, Portage and Edmonton Street branch.

The investments of the Society as at April 30, 1956, were as follows:

Bonds:	Cost	Par Value	Market Value
Government of Canada— 3% 1966 .....	\$4,042.50	\$4,000.00	\$3,780.00
Government of Canada— 3 1/4%, 1978 .....	1,473.75	1,500.00	1,503.75
Government of Canada— 3 1/4%, 1979 .....	1,003.75	1,000.00	937.50
	<u>\$6,520.00</u>	<u>\$6,500.00</u>	<u>\$6,221.25</u>

These securities, held in a safety deposit box in The Toronto-Dominion Bank, were produced for our examination and all were registered in the name of the Society. All interest has been accounted for on a received basis in the books of the Society.

In our opinion, the accompanying balance sheet and statement of revenue and expenditure are properly drawn up so as to exhibit a true and correct view of the state of the affairs of The Winnipeg Medical Society and of The Winnipeg Medical Society Library Fund as at April 30, 1956, and the results of their operations for the year ended on that date according to the best of our information and the explanations given to us and as shown by the books of the Society.

PRICE, WATERHOUSE & Co.,  
Chartered Accountants.

### Balance Sheet — April 30, 1956

ASSETS		
	General Fund	Library Fund
Cash on hand and in bank .....	\$ 3.00	\$2,138.23
Investments — at cost —		
Government of Canada Bonds .....	6,520.00	.....
	<u>\$6,523.00</u>	<u>\$2,138.23</u>
LIABILITIES		
Overdraft — The Toronto-Dominion		
Bank .....	\$ 134.29	\$ .....
Fees paid in advance .....	10.00	.....
	<u>\$ 144.29</u>	<u>\$ .....</u>
Surplus:		
Balance April 30, 1955 .....	8,861.54	1,404.26
Net revenue (expenditure) for the year .....	(2,482.83)	733.97
	<u>\$6,378.71</u>	<u>\$2,138.23</u>
	<u>\$6,523.00</u>	<u>\$2,138.23</u>

### Statement of Revenue and Expenditure For the year ended April 30, 1956

#### General Fund

Revenue:	
Annual dues:	
Active members .....	\$3,695.00
Non-residents and associates .....	22.00
	<u>\$3,717.00</u>
Bond interest .....	208.74
	<u>\$3,925.74</u>

Expenditure:	
Audit fees .....	\$ 50.00
Bank charges .....	6.20
Catering expense .....	283.13
General expense .....	96.08
Grants and donations:	
Medical College reading room .....	\$2,607.72
Library Fund .....	1,000.00



### IN EXURBIA TODAY—FAMILIES ARE PLANNED BIG

**E**xurbia is that area which spreads out luxuriously beyond the suburbs. Here live the authors of the nation's books, plays, advertisements, TV shows — and dreams. A new phenomenon has become part of the Exurbian landscape: the *planned* big family.

*Assurance wanted* — When Exurbanite wives come for advice to help them space their large families, they want to be sure that the method you recommend really does a job of protecting them.

*Ideal method* — Studies show diaphragm-jelly technique gives the greatest degree of protection.<sup>1</sup> It is preferred for women of high parity who want large families — but only *when* they want them. Urban population groups using diaphragm and jelly as recommended have an unplanned pregnancy only "once in ten to 15 years."<sup>1</sup>

*Comfort important* — With peace of mind goes comfort when the physician

prescribes the RAMSES\* Diaphragm. Its cushioned rim guards against irritation; flexibility in all planes permits easy movement. RAMSES Jelly, a "ten-hour jelly," used with the RAMSES Diaphragm, immobilizes sperm, is well tolerated, and stays effective for a full ten hours.

*Neat TUK-A-WAY\* Kit* — Patients are confident of receiving sound advice when they learn that for *thirty years* physicians have relied on RAMSES Diaphragm and Jelly to help *plan* big families. RAMSES TUK-A-WAY Kit, #701 (diaphragm, introducer and jelly), RAMSES Diaphragm 50-95 millimeters in size, RAMSES Jelly in 3 and 5 oz. tubes.

1. Tietze, C., in Dickinson, R. L.: *Techniques of Conception Control*, ed. 3, Baltimore, Williams & Wilkins Co., 1950, pp. 55-57.

\*Trade-marks

**JULIUS SCHMID** (Canada) Ltd.  
32 Bermondsey Road, Toronto 16, Canada



Sundry donations	112.00
Lantern slides and expense	3,719.72
Manitoba Medical Association — share of office salaries and expense	85.00
Printing, postage and stationery	1,320.00
Speaker — honorarium	748.44
	100.00
	6,408.57
Net expenditure for the year	\$2,482.83
<b>Library Fund</b>	
Revenue:	
Grant from Winnipeg Medical Society	\$1,000.00
Bank interest	24.02
	\$1,024.02
Expenditure:	
Books and periodicals purchased	\$ 181.29
Library supervision	106.00
Bank exchange	2.76
	290.05
Net revenue for the year	\$ 733.97

**Benevolent Fund**

May 2, 1956.

To the Members,  
The Winnipeg Medical Society,  
Winnipeg, Manitoba.

We have examined the accounts of the Fund for the year ended April 30, 1956, and submit the following statement:

Balance of Fund April 30, 1955	\$3,601.07
ADD — Income during year:	
Donations received during the year	\$1,280.00
Bond interest	45.00
	1,325.00
	\$4,926.07
DEDUCT — Expenses during year:	
Rental of safety deposit box	\$ 5.00
Exchange on cheques deposited	.87
	5.87

Balance of Fund April 30, 1956	\$4,920.20
Represented by:	
Cash on deposit with The Toronto-Dominion Bank	\$3,453.95
Government of Canada bonds, 3%, 1966, par value \$1,500.00 (market value \$1,417.50) fully registered in name of fund — at cost	1,466.25
	\$4,920.20

Donations received are in accordance with duplicate receipts examined by us.

The amount shown to be on deposit with The Toronto-Dominion Bank is in agreement with a certificate received from the bankers.

The securities are held in a safety deposit box and were produced for our examination. All interest has been accounted for on a received basis.

PRICE, WATERHOUSE & CO.,  
Chartered Accountants.

**Membership Committee**

To the President and Members of  
The Winnipeg Medical Society:

The total membership for 1955-56 season is 465, and is made up as follows:

Active paid-up members	330
Active paid-up members (half rate)	38
Associate paid-up members	2
Non-resident paid-up members	10
Total paid-up members	380

Life members	22
Free Membership—over 65	22
Non-active members	6
Membership fees unpaid	35
	85
	465

Nineteen new members have been added to the roll during the year.

Nineteen members have been lost to the Society during the year, 8 by death and 11 have left the province.

Total membership for 1954-55 was 455 as against 465 for the current year, a gain of 10.

Total paid-up membership for the current year is 380 as against 396 for 1954-55, a decrease of 16, and the number of membership fees unpaid this year is 35 against 12 of last year which is an increase of 23.

Respectfully submitted.

R. L. Cooke,  
Chairman.

**Program Committee**

To the President and Members of  
The Winnipeg Medical Society:

During the year 1955 and 1956, eight regular and two special meetings of the Winnipeg Medical Society were held and a list of the titles and speakers is as follows:

Sept. 23, 1955:  
"Ulceration of the Duodenal Bulb without Deformity"—Dr. W. J. Elliott.

Oct. 21, 1955:  
"Respiratory Infections in Infancy"—Dr. W. C. Taylor.

Film: "Lung Cancer" discussed by a panel—Dr. R. Bennet, Dr. D. W. Penner, Dr. M. B. Perrin, Dr. C. B. Schoemperlen, Dr. L. L. Whytehead.

**SPECIAL:**

Nov. 29, 1955:  
"Acute Hepatic Failure"—Dr. Sheila Sherlock, British Post Graduate Medical School, London, England.

Nov. 18, 1955:  
"Hemiplegic Migraines"—Dr. R. T. Ross.  
"Localization of Brain Tumors with Radio-Active Isotopes"—Dr. S. Kramer.

Dec. 16, 1955:  
"An Eight Year Review of Gall Bladder Surgery"—Dr. A. C. Abbott.  
"The Hormone Therapy of Asthma"—Dr. C. H. A. Walton.

Jan. 20, 1956:  
Convocation of the University of Manitoba. Convocation address by Dr. G. D. W. Cameron, Deputy Minister of Health, Ottawa (in the new auditorium, Medical College).

**DEER LODGE:**

Feb. 17, 1956:  
Clinical Programme.

Mar. 16, 1956:  
"Hip Joint Disease in Children"—Dr. F. R. Tucker.  
"Drug Therapy in Peripheral Vascular Disease"—Dr. R. M. Nickerson.

**SPECIAL:**

Mar. 27, 1956:  
"Poliomyelitis, Past, Present and Future"—Prof. John A. Anderson, Head, Dept. of Paediatrics, University of Manitoba. (In conjunction with Refresher Course).

Apr. 20, 1956:  
"The Management of Lung Failure"—Dr. R. Cherniack.  
"The Management of Breech Presentation"—Dr. A. S. Majury.

As chairman of the Program Committee, it is my pleasure to acknowledge the advice and assistance of Dr. C. W. Clark and Dr. Paul Green, the other members of the Committee, and the co-operation of the President and other members of the

# NESTARGEL

## A NEW APPROACH

## TO THICKENED FOODS FOR THE

## VOMITING INFANT

## NO CALORIC VALUE—NO TASTE—NO ODOR

Nestargel applies the principle of thickening any liquid without however changing caloric value or water content (fluid requirement) of the formula used. Feedings *become* and *remain* viscous even *after* ingestion, thereby permitting a continuing thickening effect—a feature which is lacking in the usual thickened feedings. Conditions of gastro-intestinal digestion are not modified in the presence of Nestargel.

Nestargel is also being used with success in the treatment of incoercible vomiting in pregnancy.



Supporting clinical data and samples available exclusively to the medical profession.

NESTLÉ (CANADA) LTD. 80 King St. West, Toronto, Ontario

Medical Documentation

Executive. Acknowledgment is also due to the various speakers for the excellence of the papers presented.

Respectfully submitted.

J. M. Kilgour,  
Chairman.

### Report of Representatives to the Welfare Council of Greater Winnipeg

To the President and Members of  
The Winnipeg Medical Society:

Your representative has attended meetings of the Welfare Council of Greater Winnipeg since the fall of 1955.

A well organized department exists to deal with the mentally and physically crippled. A Sheltered Workshop exists and offers employment within the limits of each individual's degree of crippling, as well as rehabilitation facilities to counsel, train and place individuals in suitable employment. Pensions are sought for the completely crippled.

In January 1956 Dr. Sisler outlined his difficulties in the field of psychiatric therapy for patients attending Out Patient Departments. Certain duplication of services strains the limited available psychiatric services. Reorganization is being attempted. More adequate public psychiatric service is the hope for the future.

A conference was held in December 1955 to discuss the plight of the Metis of this Province. The low economic status of a percentage of these people has resulted in a high incidence of social and medical problems. A survey of the situation is in progress.

In February 1956 the problems of the adolescents were discussed. The increasing incidence of unmarried mothers under the age of sixteen years was noted. A committee was appointed to investigate and report upon this matter.

In February, 1956, Dr. Morley Elliott of the Provincial Health Department, and Dr. J. L. Doupe of the Department of Physiology of the Medical School, outlined the various medical research problems currently receiving the attention of research workers in this city.

Respectfully submitted.

Christina A. Curran,  
Chairman.

### Legislative Committee

To the President and Members of  
The Winnipeg Medical Society:

As Chairman of the Legislative Committee of Fifteen of the Winnipeg Medical Society, I have nothing to report for this year.

Respectfully submitted.

W. J. Boyd,  
Chairman.

### Library Report

To the President and Members of  
The Winnipeg Medical Society:

During the past year 288 physicians, 44% of those practicing in the city, borrowed over 7,000 items.

Most book buying has been deferred this year due to the library moving to its new quarters.

Five displays of new books were given before meetings of the Society.

In addition to the usual \$1,000 library grant, the Medical Society contributed about \$2,500 out of capital account to furnish the doctors' reading room.

The library is now open in the evenings from 6 to 10 p.m. until May 18th. No individual keys are issued to doctors, but admission may be gained at any time by borrowing the key kept at the admitting office of the General Hospital.

Respectfully submitted.

Gerard Allison,  
Chairman.

### Report of the Representative to the Executive Committee of the Manitoba Medical Association

To the President and Members of  
The Winnipeg Medical Society:

Your representative has attended, to date, all but one meeting of the Manitoba Medical Executive. All meetings were lengthy, and many subjects controversial.

The Manitoba Medical Service occupied a major share of the discussion time. The matter of "extra-billing" received much attention and is probably not yet settled. A proposal to increase the proportion of lay members on the M.M.S. Board earned favourable comment. Dr. Paul L'Heureux was appointed chairman of a Special Commission to investigate certain aspects of Manitoba Medical Service as it affects the Manitoba Medical Association.

Recent moves by our Governments in the National Health field have been closely followed. Our C.M.A. representatives are as active as possible on Parliament Hill. It is noted that the Hospital Aid Act has become law in Manitoba. Further representations are being made at Ottawa for alterations in the Income Tax regulations which will permit expenses for medical conventions in the United States as well as in Canada.

A full time Public Relations expert has been appointed by the Canadian Medical Association.

It is obvious there are many unsettled affairs at Provincial and National levels. Ultimate answer to these problems affects every practitioner intimately. The members of your Manitoba Medical Association Executive and its committees appear very conscious of their responsibilities and continue to serve faithfully your best interests.

Respectfully submitted.

Earl Stephenson,  
Chairman.

### Representative to the Manitoba Medical Review

To the President and Members of  
The Winnipeg Medical Society:

As representative of the Winnipeg Medical Society to the Manitoba Medical Review, I submit herewith the following report:

As in the past, the Review has continued to give satisfactory publicity of the affairs of the Society.

Your representative did not attend any meetings of the editorial committee of the Review during the 1955-56 season.

A suggestion is presently being considered to arrange a Winnipeg Medical Society page in each issue of the Review on which reports of various activities of the Society may be presented together with notices of future meetings.

Respectfully submitted.

James W. Whiteford,  
Chairman.

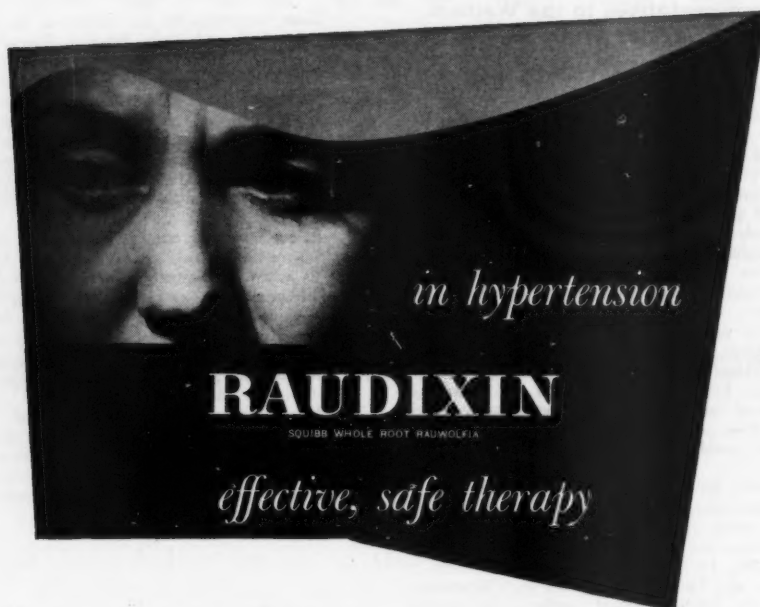
### Community Chest of Greater Winnipeg

To the President and Members of  
The Winnipeg Medical Society:

The following is my report of the comparison of the contributions for 1954 and 1955 of the Winnipeg physicians to Your Community Chest.

	1954	1955
Objective .....	\$18,000.00	\$19,500.00
Total Gift .....	16,081.00	19,729.00
Average Gift .....	37.61	47.30
Physicians (percentage contributing) .....	89.5%	89%
Non-givers .....	46	50

In addition, a considerable amount of money which cannot be calculated was given by physicians as a block gift through various scaffs and organizations.



- Virtually every patient with essential hypertension is a candidate for RAUDIXIN therapy.
- Raudixin may be prescribed to lower the blood pressure without the danger of a precipitous drop.

**In Anxiety and Tension States a non-barbiturate Tranquilizing Agent**

- Raudixin is useful in patients with psychosomatic complaints or certain conditions with associated emotional overlay, such as:

headache	insomnia
premenstrual tension	enuresis
dermatologic disorders	menopausal symptoms



**Dosage:** 100 mg. b.i.d. initially; may be adjusted.

**Supply:** 50 mg. and 100 mg. tablets, bottles of 100 and 500.

RAUDIXIN is a trade mark of  
E. R. Squibb & Sons of Canada Limited, P.O. Box 599, Montreal, P.Q.



This year, under the chairmanship of Mr. Wilson Faulder, a group of volunteer business men collected our contributions, with the co-operation of the Winnipeg Medical Society. We have assurance that the personal letters sent by selected past presidents to various members were of noticeable assistance in our satisfactory collection.

It is my opinion that the same system should be followed in future chest collections. With this year's experience, I feel certain that the 11% of our non-contributing members will be considerably reduced.

Let me congratulate our Society for their generosity.

Respectfully submitted.

Joe L. Downey,  
Chairman.

### Section of Anaesthesiology

To the President and Members of  
The Winnipeg Medical Society:

It is with pleasure that I offer the report of the Winnipeg Anaesthetists' Society for the year 1955-1956.

The program for the 1955-56 season consisted of seven monthly meetings held at the Medical Arts Club Rooms.

October, 1955—A dinner meeting was held. Dr. Max Sadove, of Chicago, as guest speaker, spoke on "Anesthesia for Cardio-vascular Surgery."

November, 1955—Dr. J. I. Davies gave a resume of his trip to the Toronto Anesthetic Meeting. Dr. S. Luginisky read an interesting paper on "The physiology and chemistry of controlled respiration." Dr. Crawford spoke on the subject of "Controlled Anesthesia."

December 1955—Annual Dinner and Dance for members and their wives.

January 1956—Dr. Max Minuck gave a paper on "Obstetrical Anesthesia," and Dr. Gunther Semelka spoke on "Infant Resuscitation."

February 1956—Dr. Virginia Apgar, of New York, gave a very interesting discussion on "Obstetrical Anesthesia."

March 1956—Two films, one on Dental Anesthesia and the other on Cardiac Surgery under Ether Analgesia were shown during the first half of the meeting. The second half was devoted to discussion of interesting cases by members of different hospitals in Winnipeg.

April 1956—Dr. D. Tass gave a brief talk on "Alcohol Blocks." A lively discussion of business problems followed this interesting paper. Officers for the 1956-57 season were elected.

May 1956—Dr. M. Nickerson was guest speaker at the final dinner meeting. The lecture on "Hypotensive Drugs" was interesting and informative.

Respectfully submitted.

A. W. Natsuk,  
Secretary.

### General Practitioners' Association of Manitoba

To the President and Members of  
The Winnipeg Medical Society:

As representative to your Executive from the General Practitioners' Association of Manitoba, I have nothing to report for this year.

Respectfully submitted.

A. T. Gowron,  
Chairman.

### Report of Public Relations Committee

To the President and Members of  
The Winnipeg Medical Society:

This new Committee is still in the formative stage. Publications from the Canadian Medical Association have been watched with interest. The new constitution includes a definite concept of the responsibilities of this Committee.

When the new constitution is passed, this Committee will have to be considerably more active than in former years. During this term there have been no significant functions to report.

Respectfully submitted.

Murray McLandress,  
Chairman.

### Benevolent Fund

To the President and Members of  
The Winnipeg Medical Society:

The following is a review of the contributions for the year 1955-56 of the Winnipeg Medical Society Benevolent Fund.

Contributions of \$1,280.00 by 121 members.

There were no disbursements during the year and the members of the Committee were not called together. However, one case was investigated by the chairman but no request for assistance resulted.

Respectfully submitted.

K. R. Trueman,  
Chairman.

### Special Committee — Medical Library

To the President and Members of  
The Winnipeg Medical Society:

Dear Sirs:

When your Executive first learned that the addition to our Medical College was to become an accomplished fact, it was our opinion that a donation should be made from the Society for the purchase of some definite piece of equipment for the new building.

At the suggestion of Dean Bell it was decided to furnish a doctor's reading room which would adjoin our new library.

In consultation with an interior decorator, Miss Monk, and Dean Bell, suitable furnishings were selected and installed at a cost of \$2,607.72.

Due credit has been given this Society in the form of a bronze plaque, and it is hoped that through the years full use will be made of this facility.

Respectfully submitted.

F. Hartley Smith,  
Chairman.

### Medical History Section

To the President and Members of  
The Winnipeg Medical Society:

Shortly after my last report, on March 31, 1955, this Section enjoyed a paper by Dr. J. D. Adamson, entitled 1855. The scope of this paper was broader than its title suggests.

At its meeting on November 4, 1955, the Section heard an interesting paper by Dr. Ross Mitchell on Medicine of the North American Indian. This being our first meeting since the publication of Dr. Mitchell's book on Medicine in Manitoba, the Section expressed its appreciation of Dr. Mitchell's historical scholarship by presenting him with a specially bound and inscribed copy of his book. At this meeting Dr. I. M. Thompson and Dr. D. Parkinson were elected Chairman and Secretary, respectively, for 1955-56.

On February 22, 1956, Dr. I. M. Thompson read a paper on The Last Days of Ian Maclaren. During the discussion a couple of senior members contributed interesting personal recollections of that writer.

On March 21, 1956, Dr. M. C. Blanchaer presented an attractive study of Claude Bernard. The ensuing discussion indicated the stimulating quality of the paper. At this meeting Dr. I. M. Thompson and Dr. D. Parkinson were re-elected Chairman and Secretary, respectively, for 1956-57.

Respectfully submitted.

I. Maclaren Thompson,  
Chairman.

### Report of Committee for Revision of the Constitution of the Winnipeg Medical Society

The Committee consists of:

Dr. David Swartz, Chairman  
Dr. Wm. Boyd  
Dr. R. L. Cooke  
Dr. A. R. Birt, ex-officio

The Constitution had previously been revised in 1945 under the able guidance of Dr. F. D. McKenty. During the ensuing 10 years the medical profession has experienced many changes brought about by scientific progress and newer considerations regarding the social aspects of medical practice. In keeping with these advances it was felt that the constitution needed to be brought up to date. The revised constitution while not revolutionary contains the necessary machinery to coincide with the methods that are being used at the present time in managing

the affairs of the Society. The revised constitution was voted upon and passed at a meeting of the Winnipeg Medical Society held in the Auditorium of the Medical College on Friday, April 20th, 1956.

Respectfully submitted.

David Swartz,  
Chairman.

### Public Health

To the President and Members of  
The Winnipeg Medical Society:

As there were no meetings of the Public Health Committee during the year there is nothing to report.  
Respectfully submitted.

R. G. Cadham,  
Chairman.

## General Medical Council of Great Britain . . . . .

Advice has been received from the General Medical Council of the United Kingdom that graduates of the University of Manitoba who qualified after October 20th, 1948, may properly be regarded as having had satisfactory experience in a resident medical capacity to entitle them to full registration by reciprocity, if they are fully registered in the Province of Manitoba.

Graduates of the University of Manitoba who qualified before that date, or persons other than graduates of the University of Manitoba who apply for full registration in the United Kingdom by virtue of membership in the College of Physicians and Surgeons of Manitoba, will be asked to produce evidence of actual hospital experience.

The College of Physicians and Surgeons of Manitoba.  
M. T. Macfarland, Registrar.

### Accuracy . . .

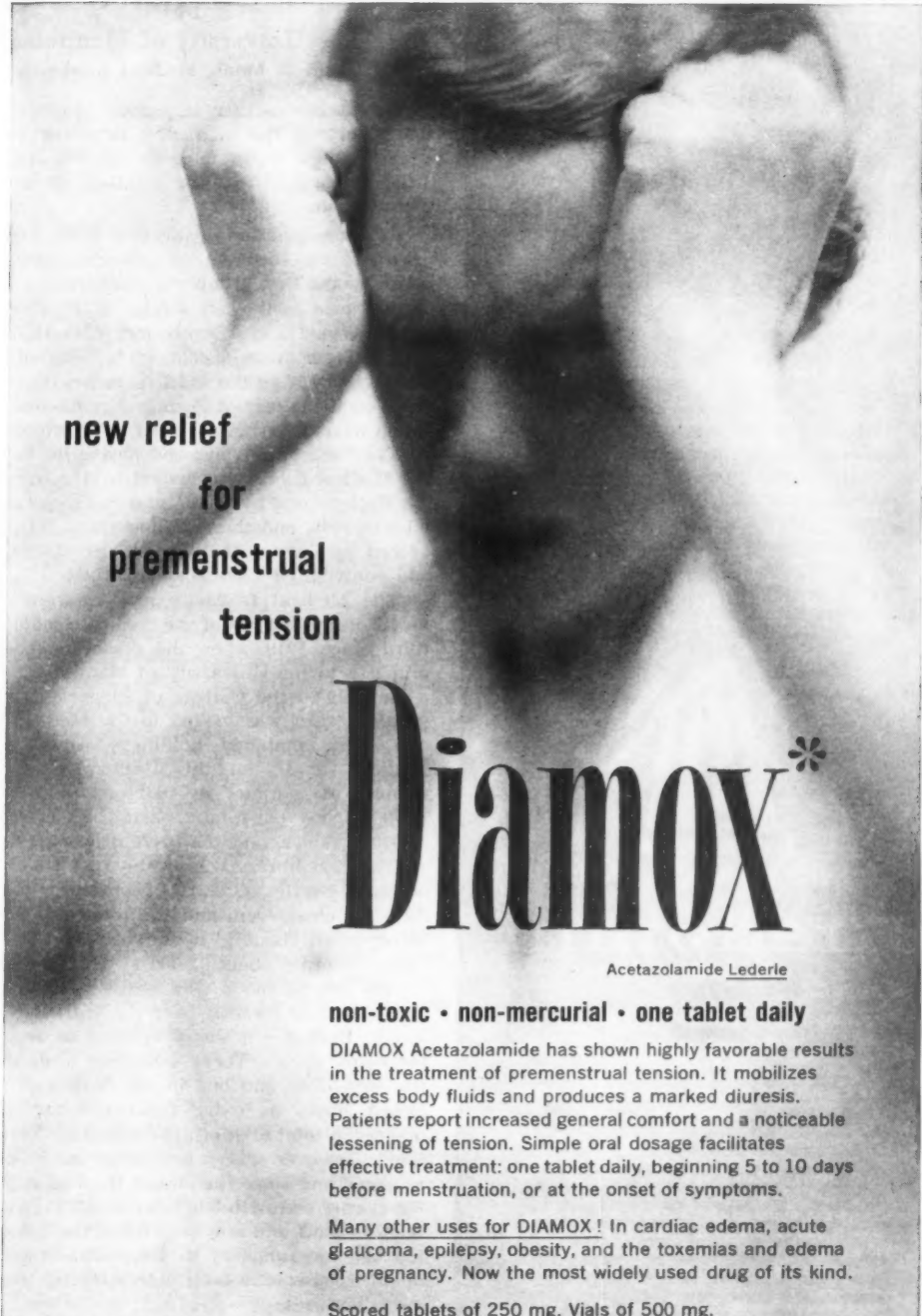
The technique of craftsmanship as we apply it  
to your prescription, is a guarantee of accuracy.



Mallon Optical

405 Graham Ave., Winnipeg 1

Phone 92-7118



new relief  
for  
premenstrual  
tension

# Diamox\*

Acetazolamide Lederle

**non-toxic • non-mercurial • one tablet daily**

DIAMOX Acetazolamide has shown highly favorable results in the treatment of premenstrual tension. It mobilizes excess body fluids and produces a marked diuresis. Patients report increased general comfort and a noticeable lessening of tension. Simple oral dosage facilitates effective treatment: one tablet daily, beginning 5 to 10 days before menstruation, or at the onset of symptoms.

Many other uses for DIAMOX! In cardiac edema, acute glaucoma, epilepsy, obesity, and the toxemias and edema of pregnancy. Now the most widely used drug of its kind.

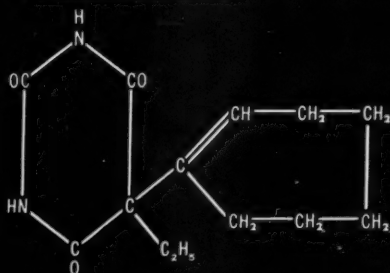
Scored tablets of 250 mg. Vials of 500 mg.



LEDERLE LABORATORIES DIVISION, NORTH AMERICAN Cyanamid LIMITED, MONTREAL, QUEBEC

\*REG. TRADE-MARK

Chemically distinctive, Medomin alone among the clinically-used barbiturates has a 7-member ring introduced into the barbiturate radical.



As the result of its unsaturated side-chains, by far the greater part of Medomin is completely broken down in the body into non-toxic products of decomposition having no hypnotic effect. These products of decomposition are quite ineffective as narcotics. The duration of Medomin's action depends almost exclusively on the dosage and in this connection, one is impressed by its freedom from side effects of large doses whether single or continued.



smoothly hypnotic "nightcap"

# medomin

(brand of heptabarbital)

## DOSAGE

As a *hypnotic*: 200-400 mg., to be taken about 30 to 45 minutes before retiring.

As a *sedative*: 50-100 mg. two or three times daily.

Medomin is an easy hypnotic which ensures restful recuperative sleep and renewed vigor. Owing to its rapid oxidation and elimination, undesirable after effects do not occur. The margin between the minimum effective dose and the toxic dose is unusually wide so that even a small dose like 100 mg. will, in many cases, have the desired effect, while even with massive dose and daily administration neither toxic effect nor addiction need be apprehended. This wide margin of safety with Medomin permits a dosage likely to suit all requirements.



GEIGY PHARMACEUTICALS

## The Medical Library of The University of Manitoba Ruth D. Monk, Medical Librarian

This year another milestone was passed in the history of the Medical Library in Winnipeg when the new wing of the Medical Buildings was officially opened by the holding of a Special Convocation.

As the population of this city and province has grown so has the Medical Library. Great credit is due to the first group who, inspired by the zeal of such men as the late Doctor H. H. Chown and Doctor Wm. Harvey Smith, met with 18 others of their profession on a cold winter's evening November 18, 1898 in the old Clarendon Hotel, which stood on the corner of Portage Avenue and Donald Street near the "Harley Street" of Winnipeg. They met to discuss the ways and means for furnishing the Medical Library, proposed by the members of the College of Physicians and Surgeons of Manitoba in 1895, and these 20 doctors at this meeting agreed to finance the furnishings of the library and contributed \$530.00 among them.

The Medical Library's new quarters are the fourth in the history of the medical school and the third since 1919 when the doctors deeded their property to the University of Manitoba.

In 1919-20 the College of Physicians and Surgeons' library was moved to the Medical College and their combined holdings formed the first Medical Library of this University. The total number of volumes in 1921 was approximately 3,079. Today the total capacity of the shelving is 35,000 volumes, and the present number is 20,000.

The first library was in the area which is now occupied by the R.C.A.F. Laboratory, the Medical Artist, a cloak-room and the mimeograph department, in all about 1,035 square feet. The library today occupies about 12,000.

The second move was in the summer of 1922. The space had recently been the Pathology Department. Here it was thought would be ample space for many years. There were two large rooms on the first floor and one in the basement, also the Board Room as extra reading room space for doctors; a total area of approximately 3,410 square feet. However, every few years more space was required and since the end of the last war in 1945 the library's growth has been constant in material, readers, staff and service. When the library vacated the old quarters in December it was using about 6,500 square feet, not including the department libraries.

All through the years the Medical Library has had the generous support of the College of Physicians and Surgeons of Manitoba, the Winnipeg Medical Society, the Manitoba Medical Association, and the individual doctor. The Manitoba



Medical Students' Association has from time to time also donated funds for the purchase of books or journals. The lay public has also contributed liberally towards the purchase of valuable reference material.

And so again on a very cold winter's evening in 1956 history repeated itself and another milestone was reached in the library's history when on January 20th the new building was officially opened.

The library is now on the main floor of the new wing, having a total seating capacity for 100. There is also additional stack and work space in the basement.

The imposing entrance, which is on the east side, is of plate glass set in aluminum. The wood-work of the furnishings is "natural" oak finish that harmonizes well with the two-tone green walls of the Periodical area and Main Reading Room.

The large "L"-shaped Circulation counter is on the right of the Foyer and faces the Reference and Periodical Reading area, which is 22 x 72 feet. It is well lighted by large windows and underneath them are grouped semi-lounge chairs with low tables for extra reading material.

The Main Reading Room runs parallel to the Reference and Periodical Reading area and is 28 x 72 feet, with continuous windows on the west wall; the dividing wall on the east is half glass. This adds light and makes for easier supervision. Book cases are placed around the walls and contain the books published within the last five years.

This room is furnished with large tables, also individual desks and around the west side and south end are grouped semi-lounge chairs with their side tables. The seating capacity of this room is 56.

The Periodical Reading area contains six journal display stands; four have the current titles and the other two have special displays. One side has each day's journals on view for 24 hours before being filed with the main current year groups. The Department journals are also shown here for one week before being taken to their respective departments.

The student journal publications from other schools are filed separately, also the Trade journals. One new feature is the displaying of the "Sample" journals received, to acquaint the profession with new titles published which are not as yet among our files.

Another innovation is the "Browsing Corner" at the far end of this area. Here are books on subjects other than medicine. Some of these volumes have been donated but for the majority we are indebted to the University librarian for their loan.

## LEUKORRHEA

### VAGINAL INFECTIONS



#### THREE FORMULAS

##### OVOQUINOL-PLAIN

Dilodihydroxyquinoline U.S.P. ....	75 mg.
Sodium Propionate .....	500 mg.
Sulfadiazine U.S.P. ....	390 mg.
Phenoxyethanol B.P.C. ....	0.04 cc.
Dextrose and Lactose .....	q.s.

##### OVOQUINOL-OESTRO

Same formula as OVOQUINOL-PLAIN  
plus 0.01 mg. Ethinyl-oestradiol B.P.  
per cone.

##### OVOQUINOL-JUNIOR

Tiny-shaped, one-third the strength of OVOQUINOL-PLAIN plus Ethinyl-oestradiol, 0.0033 mg.

##### DOSAGE

One or two cones per day preferably at  
bed-time or as prescribed by the physician.  
SUPPLIES in bottles of 15

**NADEAU LABORATORY LTD.**

Montreal

Canada

The Museum and Rare Book Room, which is 16 x 17½ feet, is at the end of the Foyer, opposite the main entrance. Its walls are lined with book shelves with glass doors, for display purposes. There is also a double display case in the centre of the room. With these features it is hoped that museum pieces, interesting books or pictures will be constantly on display.

The librarian's office and Processing departments are adjacent to the Circulation department and the stacks. At the far end of the Processing area there is a small but useful staff lounge with kitchen facilities.

There are 7 carrells (individual study cubicles) on the east side of the main stack room. These are available to the students with special assignments.

The total book capacity of the library is now 35,000 volumes, and the approximate count of volumes both in the department libraries purchased on the library's budget and those in the main stack rooms is 20,000.

At the extreme south end of the library are three graduate Study Rooms. These may be converted into a small lecture room of 25½ x 16 feet by opening the folding walls. One of these rooms is for those using the Microfilm Reader.

Adjacent to these rooms and at the end of the Periodical Reading Area is the Faculty and Doctors' Reading Room. This room, 17 x 17 feet, is tastefully furnished by a donation from the Winnipeg Medical Society. The colour scheme is a

soft neutral shade known as "nutmeg," the walls and curtains matching. The furniture is of teak wood and oak and is from Denmark; there are casual chairs, arm chairs and a comfortable "wing" chair. They are upholstered in soft green, red and blue shades of cotton tweed from Belgium. The attractive brass reading lamps are reproductions of French tole and are both useful and ornamental. Truly a room to rest, relax and read in.

### Children's Hospital Winnipeg, Man.

#### Re: Ward Rounds and Clinical Conferences

1. Weekly Grand Round 11-12 a.m. Thursday mornings throughout the year.
2. Medical Staff Clinical Luncheon, the first Friday of each month (except July and August), 12.30 to 2 p.m.
3. Special Tuesday noon conferences 12 to 1, First Tuesday of the month, Therapeutics, (Dr. Nickerson).  
Second Tuesday, X-ray Diagnosis, (Dr. Childe).  
Third Tuesday, Cardiac Conferences, (Drs. Ferguson, Medovy, Armstrong, etc.).

All these meetings take place in the Playroom at the East end of the first floor.

The members of the Medical profession are invited to attend these Conferences and Ward Rounds.



**Lederle**  
REG. TRADE-MARK

#### FOR TREATMENT AND MAINTENANCE IN ANEMIA PATIENTS

PERIHEMIN, master builder of red cells and hemoglobin, contains *all* the known hemopoietic essentials indicated for the majority of your anemic patients.

The intrinsic factor, in purified, concentrated form, enhances absorption of Vitamin B<sub>12</sub>, thus promoting rapid hematological improvement.

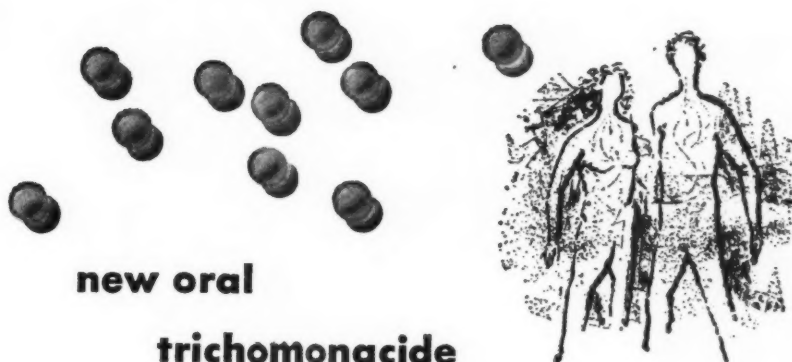
LEDERLE LABORATORIES DIVISION

NORTH AMERICAN Cyanamid LIMITED, MONTREAL, QUEBEC

NOW CONTAINS PURIFIED INTRINSIC FACTOR CONCENTRATE

# PERIHEMIN\*

HEMATINIC



**new oral**

**trichomonacide**

# TRITHEON<sup>\*</sup> TABLETS

BRAND OF AMINITROZOLE

**for male and female**

Because of their systemic action, TRITHEON tablets reach resistant trichomonads in their hiding places throughout the genitourinary tract. Unlike local trichomonacides, TRITHEON tablets eradicate the organism in male and female as proved by *negative culture*.

Clinical investigation has demonstrated that TRITHEON tablets administered orally eradicate trichomonads for **culture-proved cure** of more than 70 per cent of female patients whose husbands are treated simultaneously with TRITHEON tablets. Even when only the wife is treated, cures are effected in approximately one-third of the patients.

**Dosage:** One tablet three times daily for 10 days.

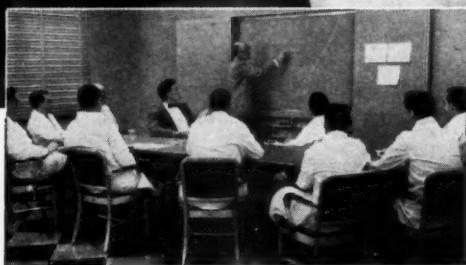
**Available:** Bottles of 30 and 180 tablets.



®TRADE MARK REG'D

**references:** (1) Perl, G.; Guttmacher, A. F., and Raggazoni, H. P.: *Male and Female Trichomoniasis—Diagnosis and Oral Treatment*. Obst. & Gynec. in press. (2) Plentl, A. A.; Gray, M. J.; Neslen, E. D., and Dalali, S. J.: *The Clinical Evaluation of 2-Acetylamino-5-Nitrothiazole, An Orally Effective Trichomonacide*, Am. J. Obst. & Gynec. 71:116, 1956. (3) Perl, G.: *Personal communication*.

# Report | from Carnation Research Laboratory



## Scientific Staff Conferences

Regular conferences of the entire research staff are held so that the pooled knowledge of these highly qualified men may establish broad general directions for major research projects. Such conferences also keep the entire staff informed of current progress in all six major research divisions.

**Continuous, Planned Research** protects the uniform optimum high quality of both established and new Carnation food products.

## 6 Research Divisions

Carnation general research projects are conducted under six major laboratory divisions: three Dairy Product Laboratories, the Nutrition Laboratory (chemical and biochemical), the Cereal Laboratory and the Analytical Laboratory.

### CARNATION PROTECTS YOUR RECOMMENDATION WITH CONTINUOUS 5-PHASE RESEARCH:

Carnation Research Laboratory,  
Carnation Farms,  
Carnation Plant Laboratories,  
Carnation Central Product  
Control Laboratory,  
Carnation-sponsored University  
and Association Research.



"from Contented Cows"



**Department of Health and Public Welfare**  
**Comparisons Communicable Diseases — Manitoba (Whites and Indians)**

DISEASES	1956		1955		Total	
	Mar. 25 to Apr. 21, '56	Feb. 26 to Mar. 24, '56	Mar. 27 to Apr. 23, '55	Feb. 27 to Mar. 26, '55	Jan. 1 to Apr. 21, '56	Jan. 1 to Apr. 23, '55
Anterior Poliomyelitis	1	2	0	1	4	2
Chickenpox	58	86	96	172	354	628
Diphtheria	0	0	0	0	0	1
Diarrhoea and Enteritis, under 1 year	7	9	4	1	35	13
Diphtheria Carriers	0	0	0	0	0	2
Dysentery—Amoebic	0	0	0	0	0	0
Dysentery—Bacillary	0	1	0	1	5	2
Erysipelas	2	2	2	1	8	5
Encephalitis	0	0	0	0	0	0
Influenza	4	9	44	12	32	64
Measles	105	210	275	494	709	1626
Measles—German	35	31	8	27	107	47
Meningococcal Meningitis	0	0	0	2	2	7
Mumps	189	196	115	172	668	615
Ophthalmia Neonatorum	0	0	0	0	0	1
Puerperal Fever	0	0	0	0	1	0
Scarlet Fever	5	21	10	19	62	82
Septic Sore Throat	0	0	2	1	4	9
Smallpox	0	0	0	0	0	0
Tetanus	0	0	0	0	0	0
Trachoma	0	0	0	0	0	0
Tuberculosis	36	45	36	39	122	122
Typhoid Fever	0	0	0	0	0	0
Typhoid Paratyphoid	0	0	0	0	1	0
Typhoid Carriers	0	0	0	0	0	0
Undulant Fever	2	1	0	0	4	0
Whooping Cough	34	28	32	78	107	265
Gonorrhoea	103	123	72	60	431	305
Syphilis	5	8	7	15	23	45
Jaundice Infectious	57	25	20	20	127	108

Four-week Period March 25 to April 21, 1956

**DEATHS FROM REPORTABLE DISEASES**

April, 1956

DISEASES	*849,000 Manitoba	*661,000 Saskatchewan	*2,825,000 Ontario	*2,952,000 Minnesota
(White Cases Only)				
*Approximate population.				
Anterior Poliomyelitis	1	—	1	4
Chickenpox	58	—	1408	—
Diarrhoea & Enteritis, under 1 year	7	7	—	—
Diphtheria	—	—	2	3
Diphtheria Carriers	—	—	—	—
Dysentery—Amoebic	—	—	3	—
Bacillary	—	1	4	7
Encephalitis Infectious	—	—	—	—
Erysipelas	2	—	—	—
Influenza	4	—	58	89
Jaundice Infectious	57	64	31	43
Measles	105	3	2379	72
German Measles	35	—	3521	—
Meningitis Meningococcus	—	—	13	3
Mumps	189	3	1673	—
Ophthal. Neonat.	—	—	—	—
Puerperal Fever	—	—	—	—
Scarlet Fever	5	6	731	151
Septic Sore Throat	—	33	9	108
Smallpox	—	—	—	—
Tetanus	—	—	—	—
Trachoma	—	—	—	—
Tuberculosis	36	13	96	82
Tularemia	—	—	1	—
Typhoid Fever	—	1	2	3
Typh. Para-typhoid	—	—	1	—
Typhoid Carriers	—	—	—	—
Undulant Fever	2	—	2	4
Whooping Cough	34	18	80	8
Gonorrhoea	103	—	*44	—
Syphilis	5	—	*14	—

\*Statistics for one week only

**Urban**—Cancer, 51; Influenza, 2; Pneumonia Lobar (490) 5; Tuberculosis, 4; Pneumonia (other forms) 18. Other deaths under 1 year, 21. Other deaths over 1 year, 242. Stillbirths, 16. Total, 359.

**Rural**—Cancer, 56; Influenza, 7; Pneumonia Lobar (490), 2; Pneumonia (other forms), 19; Tuberculosis, 6; Whooping Cough, 3; Diarrhoea and Enteritis, 3; Septic Sore Throat, 1; Septicaemia and Pyaemia, 2. Other deaths under 1 year, 15. Other deaths over 1 year, 222. Stillbirths, 9. Total, 345.

**Indians**—Pneumonia (other forms), 6; Jaundice (infectious) 1. Other deaths under 1 year, 4. Other deaths over 1 year, 2. Stillbirths, 1. Total, 14.

**Poliomyelitis**—no further Poliomyelitis cases have been reported since March 26th.

**Scarlet Fever**—a small outbreak of Scarlet Fever has been reported from St. Boniface College.

**Chickenpox, Measles and Mumps** have shown a slight decrease but still fairly prevalent.

**Jaundice Infectious** shows a decided increase over the last report.

**Gonorrhoea** is once again increased over the same period last year while **Syphilis** has decreased.